

La Gravity is a factor of Temperature !

$$G = \left(10^{\frac{1}{\text{Log } T}} \right)^n$$

It's the formula for the
Creation of the World, cf. note.

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1. Introduction

Here, we discuss Gravity. What is its origin? What is its nature? How does it actually work? The issue of how we might soon harness it for all sorts of new applications will be addressed in the conclusion, at point **10**.

Since gravity (G) has generated much discussion, these questions will be addressed step by step. It should be noted that the data presented in this note comes from public sources. Their internet links are available in the appendix.

Anyone can verify this information and reproduce the results of this note through simple operations.



2. Stade of Art

The gravity of any celestial body has been accurately calculated using the formulas of Newton (1687) and Einstein (1905-15). However, these formulas have a limitation¹. They provide a result, the value of gravity, without explaining its exact origin and nature. At the foundation of these formulas lies the "Universal Gravitational Constant," established by Isaac Newton at $G \approx 6.67430 \times 10^{-11} \text{ m}^3 \cdot \text{kg}^{-1} \cdot \text{s}^{-2}$. Therefore, when calculating gravity in this way, we are always dealing with a fixed quantity that is itself related to gravity.

This fact is not irregular. It simply needs to be reiterated to highlight that gravity calculated in this manner is always a multiple of the fundamental, universal gravity - the constant. Its origin and exact nature are therefore never explicitly stated. It's as if we are dealing with a stowaway or playing with a ghost. This is why this phenomenon has remained enigmatic to this day.

What is its origin? What is its nature? How does it actually work? These are three of the questions about gravity that remain unanswered. But there are many more.

3. Genealogy of Gravity (illustrated Narrative)

Thousands of years ago, at the very start of reflections on gravity, there was first a universal phenomenon: a mass falling vertically under its influence — without mass, there is no gravity. This fact has been established on this planet since people began handling stones.

Much later, the precision of this fact was definitively confirmed by sending a satellite into space (Sputnik, 1957) and then an astronaut (Gagarin, 1961). These experiences, far removed from the influence of Earth's gravity, clearly demonstrated that their masses suddenly weighed almost nothing. Thus, Sputnik and Gagarin floated in interstellar space in relative weightlessness. Without the weight of a mass, there is no gravity; without gravity, there is no weight of a mass. It took tens of thousands of years to begin to see this clearly.

This reminder is simplistic compared to the complexity of the historical stages and successive advances that brought the analysis of gravity over the centuries. Its purpose is simply to reiterate that, to understand gravity, one must understand what happens around the mass.

Here is some information on the subject.

¹ Formula for Newton, $F = G \frac{m_1 m_2}{r^2}$ and for Einstein, $R_{\mu\nu} - \frac{1}{2} g_{\mu\nu} R + g_{\mu\nu} \Lambda = \frac{8\pi G}{c^4} T_{\mu\nu}$ G appears as such in the fourth term.

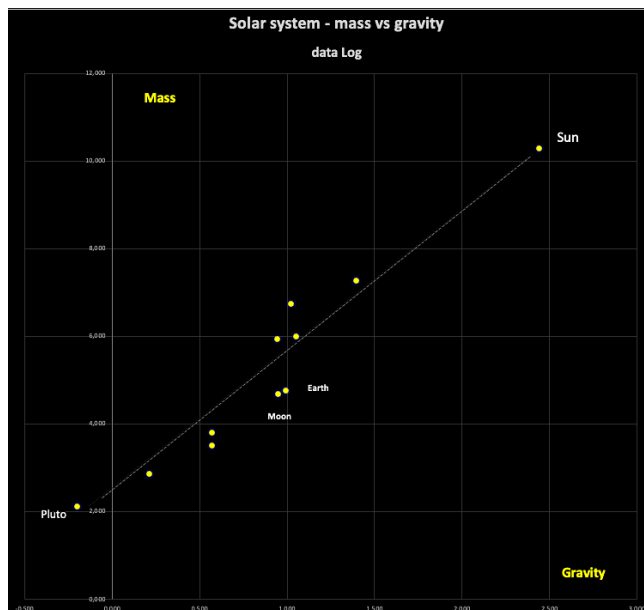
4. The Relationship Between Gravity and Mass

These are the gravities and masses established for the 9 most well-known celestial bodies in our solar system². Pluto has been included, even though it is officially classified as a dwarf planet. Our Moon has also been added, even though it is a satellite. However, both have almost no atmosphere, which is of interest that we will discuss later. Thus, the solar system as we know it is nearly complete, excluding moons.

In this table, a logarithmic scale is also used (3rd and 4th columns). It allows for the comparison of data³. Otherwise, the celestial bodies have such varying dimensions that they cannot be well represented within the limited space of a graph— such as the Sun versus the other planets, for example.

	Gravity (G)	Mass (M)	G	M
	M/s at the surface	Kilo & at power 10 ^ 20	Log	Log
Sun	273,95	19 890 000 000	2,438	10,299
Mercury	3,70	3 301	0,568	3,519
Venus	8,87	48 670	0,948	4,687
Earth	9,81	59 720	0,992	4,776
Moon	1,62	734	0,210	2,866
Mars	3,71	6 417	0,569	3,807
Jupiter	24,79	18 980 000	1,394	7,278
Saturn	10,44	5 683 000	1,019	6,755
Uranus	8,69	868 100	0,939	5,939
Neptune	11,15	1 024 300	1,047	6,010
Pluto	0,63	131	-0,204	2,117

Now, let's represent these celestial bodies according to their masses and gravities using this log scale.



The result was expected. It is a diagram that shows a certain regularity and linearity: as the masses of the considered planets increase, their gravities also increase. This is something we have been able to predict since Newton, see page 1, note (1).

Since gravity and mass are related (we knew this, but now we can see it), we can then decide for all celestial bodies to:

1. Multiply⁴ their gravities by their masses: for example, for the Sun: $\approx 2.5 \times 10 = 25$ (log data),
2. Present the results in descending order, starting with the Sun which has the highest result.

This results in:

² Much of the data on the planets of the solar system results from calculations and estimations. Essentially, these are theoretical estimates. No human equipped with measuring instruments has gone beyond the Moon. Few spacecraft have truly analyzed all these planets. Either because they are far away (Neptune is 11,000 times the Earth-Moon distance, 384,000 km), or because they are also hostile: Venus has a temperature of 737 Kelvin (464°C) and its atmosphere is acidic. In addition to being opaque, it has an estimated pressure of 90 bars, 90 times that of Earth. Everything we currently manufacture on Earth can only withstand such conditions for about an hour.

³ For those who may have forgotten: the logarithm is a way of presenting a number, its dimensional reduction; it does not change the number itself. See: <https://en.wikipedia.org/wiki/Logarithm#Motivation>

⁴ Why multiplication? Subtracting the gravity/temperature variables from each other would deny their relationship; division is a form of subtraction; adding the gravity/mass variables would not make sense given their orders of magnitude and would also diminish their relationship: only multiplication can establish their synergy.



	G	M	$G \times M$	$G \times M$	
	Log	Log	Log Stellar Order	Log Decreasing Order	
Sun	2,438	10,299	25,105	25,105	Sun
Mercury	0,568	3,519	1,999	10,148	Jupiter
Venus	0,948	4,687	4,443	6,881	Saturn
Earth	0,992	4,776	4,736	6,295	Neptune
Moon	0,210	2,866	0,602	5,576	Uranus
Mars	0,569	3,807	2,168	4,736	Earth
Jupiter	1,394	7,278	10,148	4,443	Venus
Saturn	1,019	6,755	6,881	2,168	Mars
Uranus	0,939	5,939	5,576	1,999	Mercury
Neptune	1,047	6,010	6,295	0,602	Moon
Pluto	-0,204	2,117	-0,432	-0,432	Pluto

In the 4th and 5th columns of this table ($G \times M$, descending order, log values), only the order of the celestial bodies is changed. The Sun remains at the top (value 25.105), but the Moon and Pluto end up at the bottom of the table.

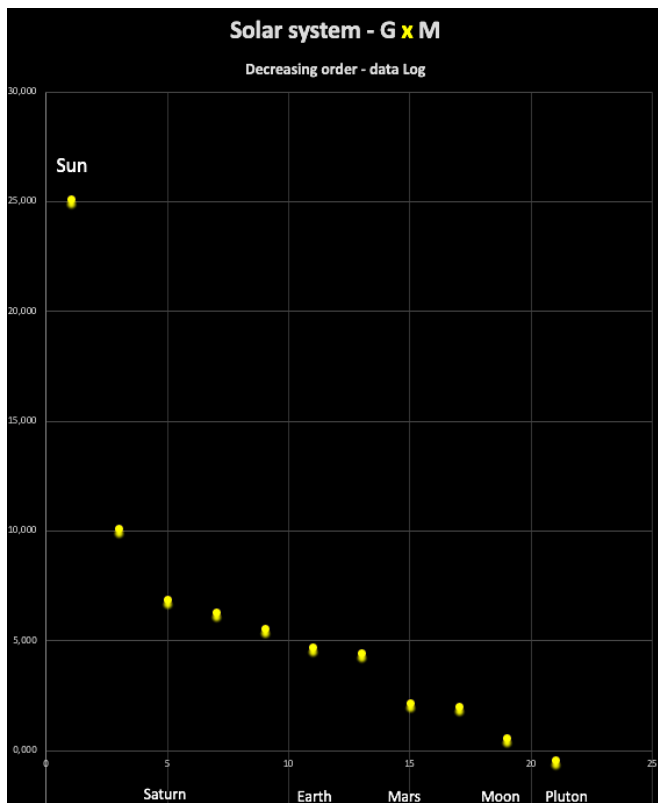
As noted, they have very different parameters. The Moon weighs 5.6 times more than Pluto. And it is 15,526 times closer to the Sun ($\approx 380,000$ km) than Pluto, which is about 5.9 billion km from the Sun, after Neptune.

Their only apparent common feature is a near absence of atmosphere.

With the 4th and 5th columns of this table, we can represent the relationship between the two variables (gravity/mass) of celestial bodies using a single composite value that associates them, $G \times M$.

From a physical standpoint, the operation does not have any particular significance (see appendix: the measurement problem). However, mathematically speaking, it better represents the linear relationship connecting gravity and mass. This multiplication is performed based on a common relevant denominator, the kilogram. The kilogram is present both in the measurement of gravity and in the measurement of mass. Here is what it shows:

What appears is a fairly regular curve, resembling the typical shape of a reciprocal function of the form $1/x$.



Here, we see, in summary, a linear relationship between the gravities and masses of the celestial bodies in the solar system, represented by a single composite value.

At this stage, we have visually observed the mechanical relationship between gravity and mass. However, a problem remains: this representation will never allow us to understand gravity itself. As noted in Point (2): State of the Art, what we are doing here is multiplying a gravity by a mass, which is itself calculated using gravity.

Thus, the solution to the puzzle we are trying to solve is, in fact, trapped within these calculations and this graphical representation. From the perspective of formal logic, this situation characterizes a tautology: with minor adjustments, the same process essentially leads to the same result.

5. The Question to solve

To escape this impasse, we need to compare gravity to another variable. A variable that, unlike mass, is not inherently dependent on it. This allows us to establish a more effective metric and, therefore, a better understanding of the phenomenon: gravity.



This point needs to be illustrated. It is fundamental, and this analogy helps to visualize it better and understand its importance:

- For example, we can measure human sizes by comparing them to a 'fundamental' human size. The President, the CEO, the Chief of the Tribe, or even the intern, as the smallest: the 'elementary unit.'
- By doing so, we get size results that are multiples of the intern's size, providing a relativistic view. However, we still won't know the intrinsic size of each person measured this way.
- To solve this, we need to invent a meter and use it: that is, employ a variable and a metric that do not inherently depend on the size of the individuals being measured.
- Thus, we obtain results that are not tied to the measured individuals but to a universal measuring unit, the meter.

Let's return to our topic.

Next, the sought variable must have its cause originating necessarily from outside the masses of the planets and their gravities. Otherwise, this variable would be inherently linked to mass, bringing us back to the previous impasse: calculating gravity with more or less gravity.

In reality, there is only one variable that best meets this constraint (an external origin to the masses / non-inherent dependency): **Temperature**⁵.

Here is the illustrated reason: The Earth's temperature depends **99.97%** on solar radiation. This is an official data point. It refers to its radiative balance⁶. The Earth's temperature depends 99.97% on solar radiation. This is an official figure and refers to its radiative balance. For Mercury and Venus, this dependence is = 100%, given their much closer proximity to the Sun. Conversely, for planets farther from the Sun, such as Saturn, Uranus, and Neptune, the dependence is proportional to their distances from the Sun. These planets are cold or even icy primarily because of their distance vs the Sun.

Symmetrically, this means that, by comparison and in standard conditions, other factors contributing to the internal temperatures of planets have a secondary or marginal weight. For example, the geothermal heat from the Earth's core, which is molten and represents 17% of the Earth's volume, has a relatively minor impact⁷. It contributes to its temperature **4,000** times less than solar radiation⁸.

The same applies to the climate of a planet's atmosphere. When it exists, it has an even more marginal⁹ effect. Compared to the effects of the Sun, the differences in magnitude are: **astronomical**.

⁵ The spectral signature of planets could be used. However, this approach (which has been registered ©) would be more complex. Additionally, the spectral signature of a celestial body is a derived manifestation of its temperature, which is primary: one causes the other.

⁶ https://en.wikipedia.org/wiki/Earth%27s_energy_budget

⁷ https://en.wikipedia.org/wiki/Internal_structure_of_Earth

⁸ See https://en.wikipedia.org/wiki/Earth%27s_energy_budget The Earth receives an annual 174 petawatts; its geothermal energy represents 44.2 terawatts. The ratio of the two is equal to: $174 \times 10^{15} / 44.2 \times 10^{12} = 3936.65$, or **= 4000**

⁹ Many planets have cores that can be extremely hot, even molten. They may also have an atmosphere — an envelope that, from the outside, moderates the intensity of stellar radiation (reflectivity of the albedo effect) and, from the inside, accumulates that same radiation. Venus and Pluto have virtually no atmosphere; neither does the Moon. In all cases, this climatic effect on a planet's temperature is secondary to marginal compared to the effect of the Sun, due to differences in orders of magnitude.

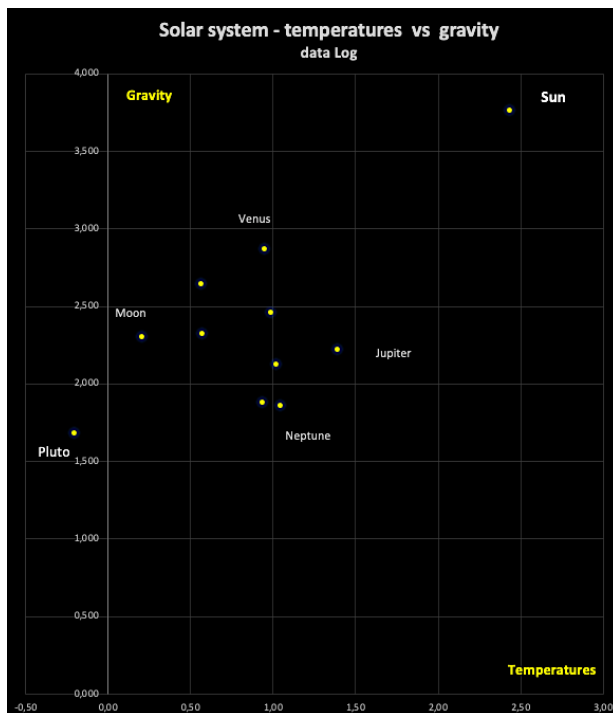
6. Gravity & Température

Now, this table presents the solar system based on the criteria of Gravity and Temperature, with the log data (in green) for the same reason as before.

Temperatures are conventionally expressed in Kelvins, that is, in degrees Celsius + 273.5:

Graphically speaking, the representation of the planets in the solar system according to their gravity and temperature looks like this:

	Gravity (G)	Temperature (T)	G	T
	En m/s	Average	Log	Log
	at the surface	en Kelvin		
Sun	273,95	5 772	2,44	3,761
Mercury	3,70	440	0,57	2,643
Venus	8,87	737	0,95	2,867
Earth	9,81	288	0,99	2,459
Moon	1,62	200	0,21	2,301
Mars	3,71	210	0,57	2,322
Jupiter	24,79	165	1,39	2,217
Saturn	10,44	134	1,02	2,127
Uranus	8,69	76	0,94	1,881
Neptune	11,15	72	1,05	1,857
Pluto	0,63	48	-0,20	1,681



Here, we can note another form of regularity.

We still have the extremes of the solar system, the Sun and Pluto; the Sun at the center of our microcosm and Pluto at the other end.

The other planets appear to be more clustered in the same zone.

Next, we can reproduce the previous operation identically:

1. Multiplication of gravity by the variable (Temperature this time), because if these variables are indeed related, their linear relationship should also become apparent.
2. Graphical representation in descending order, starting again from the Sun.

Here is what it looks like :

	G	T	$G \times T$	$G \times T$	
	Log	Log	Log Stellar Order	Log Decreasing	
Sun	2,44	3,76	9,169	9,169	Sun
Mercury	0,57	2,64	1,502	3,092	Jupiter
Venus	0,95	2,87	2,718	2,718	Venus
Earth	0,99	2,46	2,439	2,439	Earth
Moon	0,21	2,30	0,483	2,167	Saturn
Mars	0,57	2,32	1,322	1,945	Neptune
Jupiter	1,39	2,22	3,092	1,766	Uranus
Saturn	1,02	2,13	2,167	1,502	Mercury
Uranus	0,94	1,88	1,766	1,322	Mars
Neptune	1,05	1,86	1,945	0,483	Moon
Pluto	-0,20	1,68	-0,343	-0,343	Pluto

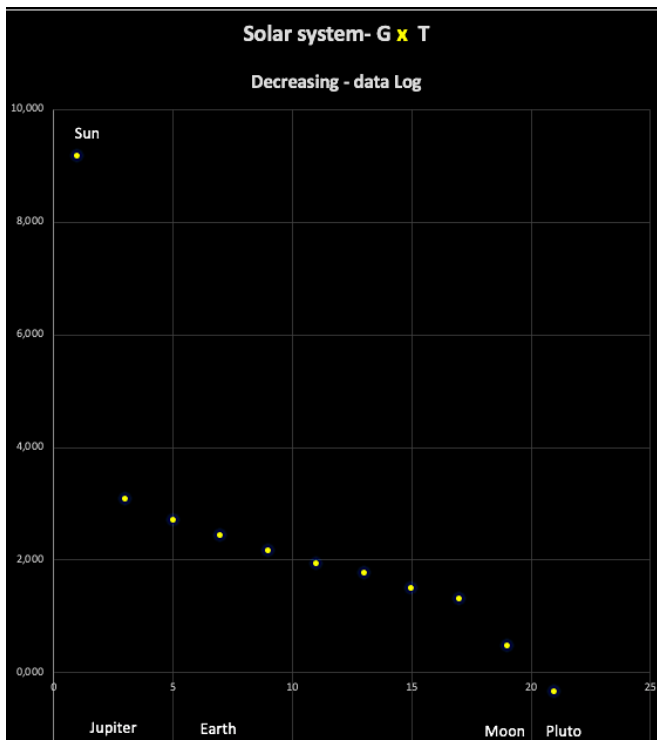
In the 4th and 5th columns of this table ($G \times T$, descending order, log value), it is simply the order of the celestial bodies that is modified. The Sun remains at the top (value 9.169), and the Moon and Pluto are also found at the very bottom of the table.

However, as we can note once again, they display significantly different parameters. The Moon is 5.6 times heavier than Pluto. And it is 15,526 times closer to the Sun ($\approx 380,000$ km) than Pluto, which is about 5.9 billion km from the Sun, beyond Neptune.

Their only apparent commonality: a near absence of atmosphere.

With the 4th-5th columns of this table, we can again represent the relationship between these two variables (gravity/temperature) of the celestial bodies using a single composite data point that combines them, $G \times T$, on a logarithmic scale. If these variables are connected, their relationship should become apparent.

Here is what it looks like:



Here again, we find, in summary, because it is with a single composite data point, the linearity of the relationship between the gravities and temperatures of the celestial bodies in the solar system.

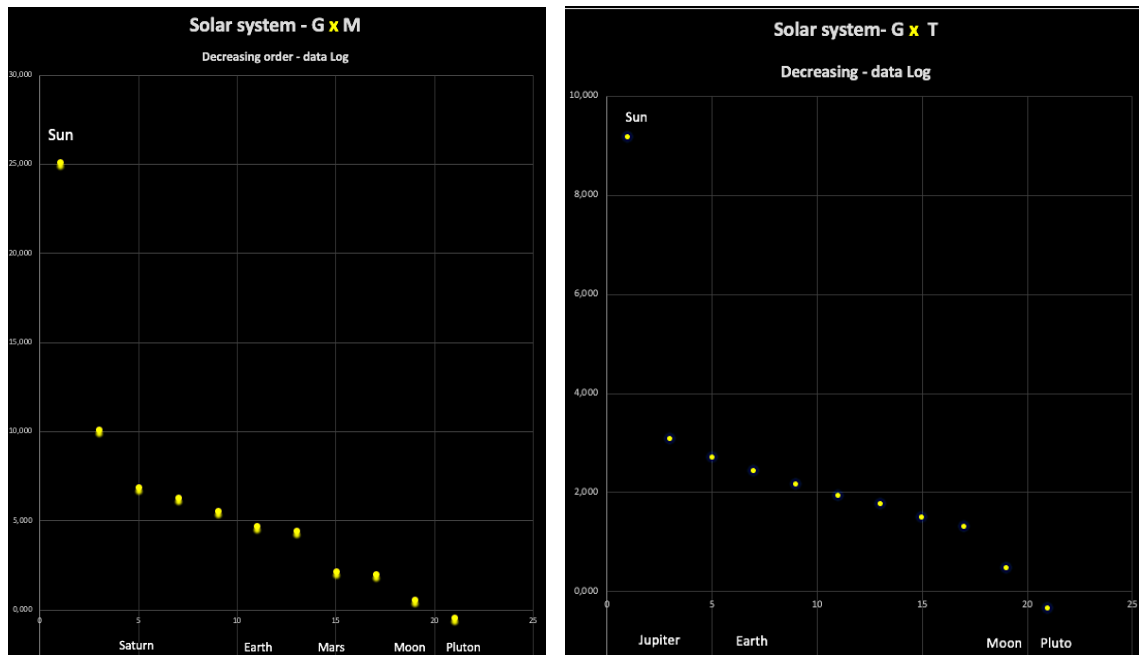
And once again, what appears is a curve that resembles the typical shape of a reciprocal function of the $1/x$ type.

But this time, the pattern that emerges between the gravities and temperatures of the celestial bodies is an extremely regular curve that is almost linear in nature.

This suggests that Temperature and Gravity are much more closely related than Gravity and Mass.

And this can actually be visually verified in this way :

Comparison of the two final results: $G \times \text{Mass}$ and $G \times \text{Temperature}$:



Note: The scales of the graphs, which differ due to the mass or temperature data, have been kept identical (see grids/squares)

Conclusions

- The temperature of the planets, a variable primarily external to their masses, expresses the relationship to gravity much more regularly and therefore more closely.
- Temperature & Gravity are thus much more closely related than Mass & Gravity.

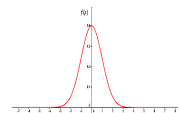
This finding can be directly demonstrated and refined through functional analysis. This requires moving to a higher logical level.

[Next, we will reason on a standard basis. The relationship between temperature and gravity will be discussed in detail further on. Its foundations are very deep. It involves Physics, Astrophysics, as well as Quantum Physics, along with their relative histories and the current divergences and contradictions within these sciences: all of this necessitates a development that is both specific and thorough, see Appendix.]

Notes for astrophysicists: see graphs: considering these results and assuming that gravity measurements are less reliable than temperature measurements (since the latter are linked to the planets' light spectra, which are directly observed), it can be deduced that the average gravity of **Mars** should actually be slightly lower than currently accepted. Similarly, the gravity of **Jupiter** should, in reality, be somewhat higher.

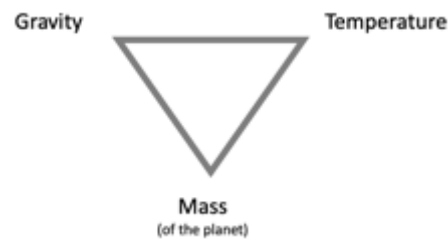
This is because, in both cases, see the G/T graph, the G/T relationship would appear more linear and regular.

Moreover, the G/T relationship fits the general shape of an S-curve, a **sigmoid**. It can be inferred that, generalized to the scale of the galaxy or the universe, by rearranging the $G \times T$ results by frequency of occurrences and according to the distinction between cold and hot planets, the G/T relationship will manifest as a Normal Distribution, with a very pronounced curvature; this is simply logical: there are many fewer suns in the universe (thus situated at the top of the Gaussian curve) than there are planets.

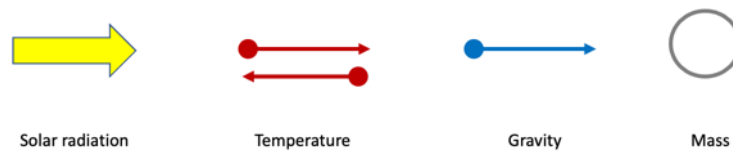


7. Temperature & Gravity, functional analysis

We are thus in this situation:



The question to be resolved is to determine: which comes first, the chicken or the egg? What actually causes what? The objects we need to consider to answer this question are as follows:

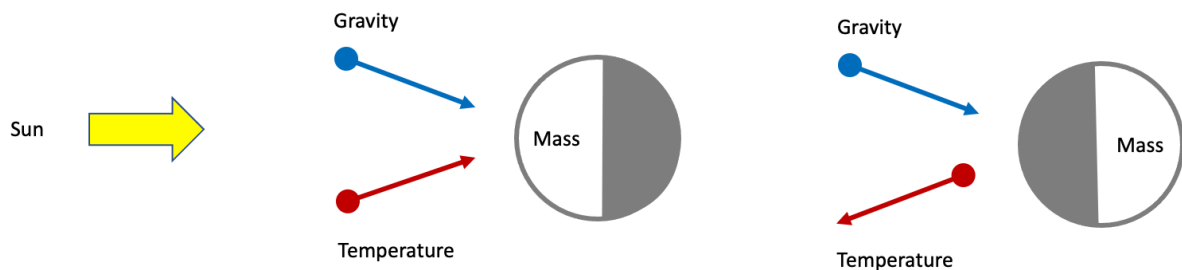


(For a given planet, gravity and solar radiation always have a single direction of propagation.)

Now, we can arrange these objects into a system under two aspects:

The state of the system

Here, it is necessary to distinguish between day and night. Planets are spherical objects. So, regardless of the inclination of their rotational axes (which vary), one of their hemispheres — half of the planet — never receives solar radiation during half of their rotation period (day/night) around themselves.



During the day, solar radiation (for example, 99.97% of Earth's energy) almost entirely dictates and directs the propagation of a planet's temperature, heat, or thermal radiation (here, the terms are roughly equivalent). This is simply due to the differences in magnitudes involved, as mentioned earlier.

At night, gravity does not disappear (as everyone knows). However, the direction of propagation of the planet's thermal radiation or heat is reversed. Due to the absence of the sun, the planet's mass releases and dissipates the accumulated heat/temperature from the entire day into the atmosphere and then into interstellar space¹⁰.

¹⁰ See further on: if the variations in solar exposure of planets according to their seasons have no detectable effects on their gravities, it means that gravity is a marginal byproduct of **i)** their temperatures, **ii)** constant with respect to their masses..

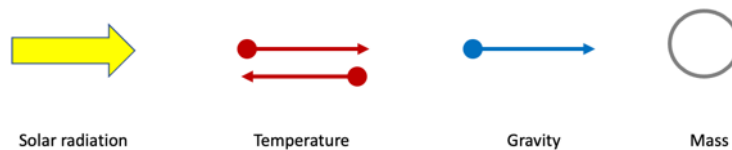
Here, it is a mechanism of elementary inertia, also described by Newton¹¹. Anyone can observe, especially in the summer, when walls heated throughout the day remain warm throughout the night.

(By the way, the extraordinary Peach Walls founded in the 17th century in Montreuil, Paris, France, were based on this very principle: https://en.wikipedia.org/wiki/Peach_wall).

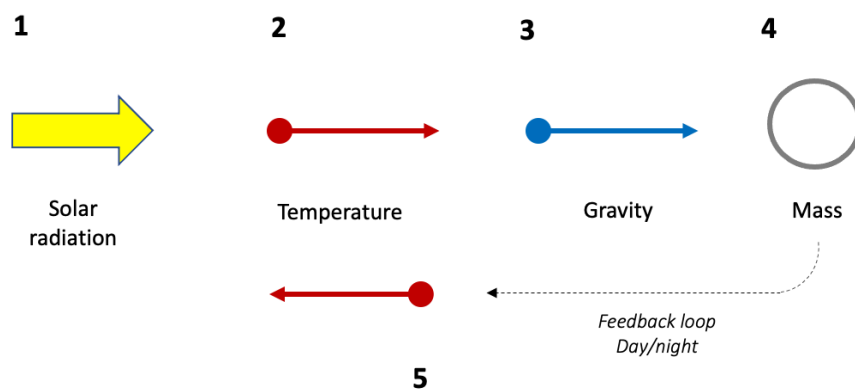
Although this may seem obvious, it is already interesting to note that gravity always has only one direction of propagation: from the periphery towards the center (or from top to bottom). In contrast, temperature/heat has two directions. We will discuss this further later.

The process of the system

In terms of process, there is only one way to order these objects:



Here is what it looks like:



The sun can only occupy the first position. It is the one that determines the Temperature, which in turn determines the gravity. If the sun were not in this position, this functional scheme would be inconsistent, or there would no longer be any possibility of Temperature and Gravity.

It is also known that wandering planets in the universe, which are thus without a sun, are cold and display residual gravity. Their fate (which may require astronomical time) is always to enter or re-enter the gravitational field of some solar system, where they find themselves in the above situation. The universe is not made up of wandering planets drifting randomly. Otherwise, it would have been observed long ago.

Second point: Gravity cannot be placed between the sun and Temperature. Otherwise, it would symmetrically state that Gravity generates Heat/Temperature. Specifically, that it would unilaterally be the primary essential cause of it. This contradicts the known state of Reality and our historical knowledge of it. Without considering more sophisticated knowledge - which is mentioned in the footnotes for reference - it can indeed be immediately affirmed that¹²,

¹¹ Newton's Law of Cooling published in 1687: https://en.wikipedia.org/wiki/Newton%27s_law_of_cooling

¹² The temperature of a planet is determined by its radiative balance, https://en.wikipedia.org/wiki/Earth%27s_energy_budget where the energy from the sun plays the predominant role. This temperature is established by a standard formula that does not take gravity into account (see next page).

- Gravity is a nearly uniform constant for planets; it does not vary significantly.
- If Gravity were the primary essential cause of their Temperatures, we would need to explain why, for example, on Earth, our nights are always colder than our days...?
- In summary, the constant is stable, but between day and night, Temperature can easily vary from simple to double: Gravity cannot be the primary essential cause of Temperature. Although it may directly contribute under certain limiting conditions, as we will discuss, these are not standard conditions.

To conclude on this point, one could argue that Gravity and Temperature must be concomitant phenomena. Yes. But this statement pertains to the state of the system (as previously explained), not its process. That is, its chain of causality considered over time.

Generale conclusion

- Temperature is the primary essential cause of Gravity.
- With respect to the Temperature & Gravity pair, Mass is the medium and the basis of their relationship. Otherwise, the linearity of the Mass & Gravity relationship would be stronger than the linearity of the Temperature & Gravity relationship: we have shown the opposite above, page. 8.

Another fact validates this conclusion, which may seem shocking at first glance. We provide the data in the appendices to avoid complicating the discussion:

When considering the set of planets in the solar system, and then the correlation coefficient of these planets' gravities with their volumetric masses (kilos/m³), we not only find that this correlation is weak or null, but we are surprised to find that it is **negative** (-0.29), see appendix.

This implies that Gravity is actually indifferent to depth as well as to mass density. This is because mass density is defined by the volumetric mass of any object: a given volume (m³) with a certain weight (kilo). For example, the Earth's mass density is 5515 kilos/m³. So, each cubic meter of Earth weighs on average 5515 kilos.

Gravity does not care about this. This is well understood when we discover its fundamental link to Temperature, for which mass is merely the: **mediator**.

Then, at the known origin of the universe, a Big Bang occurred. An immense explosion of energy, radiation, heat, and thus Temperature. Between the time-point 0 and approximately 380,000 years later, gravity played a secondary, even marginal, role compared to all the other forces at play, which were then dominant and all related to radiation and heat phenomena.

Today, after approximately 14 billion years, the situation has completely reversed: gravity now dominates the universe. From its original immense temperature, only the cosmic microwave background (CMB) remains, with a temperature close to absolute zero, 2.73 kelvins. Over time, Gravity and Temperature have evolved in opposite directions from one another, as has the nature of their causal relationship.

8. First formulation

Since we have arrived at this discovery through the multiplication $\text{Log}(G) \times \text{Log}(T)$, where G and T are the gravity and temperature of the planets, we can write:

$$\text{Log}(G) \times \text{Log}(T) = n$$

$$\text{Log}(G) = \frac{n}{\text{Log}(T)}$$

$$G = 10^{\frac{n}{\text{Log}(T)}}$$

$$G = \left(10^{\frac{1}{\text{Log}(T)}}\right)^n$$

With n , a variable dependent¹³ on T and G , which we will discuss further, and T , the temperature, calculated (here, outside the atmosphere) by the standard formula of the radiative balance of any planet¹⁴.

$$T_e = \left(\frac{(1-\alpha) \cdot S}{4\sigma}\right)^{1/4}$$

This allows us to conclude : Gravity is a factor of Temperature.

In reality, $G = (10^{1/\log T})^n$ represents the true universal law of gravity. More precisely, it should be stated that Gravity is a power of 10 factor of the inverse of the logarithm of Temperature raised to the power of n ; n connecting gravity and the temperature of a planet. This describes the formula exactly but is much less immediately comprehensible to most people.

In everyday language, it can also be said that the reason why you stand upright with both feet on the Earth every day is actually due to the temperature of this planet, along with your own temperature at the margin. This is the astonishing new insight of this discovery: the **G/T** link.

Some may find this difficult to accept.

- « How could temperature have a relationship with a concept of gravity that relates to my weight, for example? »

Indeed, this result does not speak to our senses. But what needs to be considered is that through the concept of Temperature, there is nothing more or less than: thermal Energy, of which temperature is the measure. This is also the most evident form of energy for each of us.

¹³ This condition is a given. It is deduced from the actual data, see the $G \times T$ graph on a logarithmic scale. If n were an independent variable, the formula could produce aberrant results, uncorrelated with G and T . The formula is presented in this form to highlight the power of 10 relationship but inversely logarithmic between Gravity (**G**) and Temperature (**T**).

¹⁴ Classical formula of the radiative balance, where α is the planet's albedo (the fraction of light reflected by the planet); S is the solar energy received per unit area at the planet's distance from the Sun (solar constant); $1/4$ represents the solar energy distributed over the entire surface of the planet; σ is the Stefan-Boltzmann constant $\approx 5.67 \times 10^{-8} \text{ W} \cdot \text{m}^{-2} \cdot \text{K}^{-4}$; and T is the planet's temperature in Kelvin (**K**).

Although one might still write: gravity is a factor in a planet's thermal energy. A more conceptual formulation, which will, in our opinion, be less clear to most people than *"Gravity is a factor in Temperature."*

A Note

By the way, you'll notice that everyone has, for example, gotten used to $E = mc^2$. But there was, and still is, nothing obvious about equating (=) Energy with mass (m) multiplied by the speed of light (c) squared. It doesn't speak any more to our senses.

- *"How could a mass, which for example refers to my weight, with the speed of light squared, have any relation to energy; do I look like a coal ember? A flame?"*

It speaks so little to our senses that most people are no longer able to explain $E = mc^2$ other than with their hands. It must also be said that providing this explanation quickly becomes more sophisticated. You need to explain the relationship between energy, mass, light, and connect it all to questions of frequency and Planck's constant. It's not that complicated. In France, it is taught from the age of 16 and at the Bac-2 level. But no matter what is done, this relationship will never speak to our senses.

This note does not suggest that most people are idiots or incompetent. It states that our senses are the primary and constant tools of our understanding of reality. Thus, after the age of often tedious school learning, and unless one continues to maintain a scientific culture or specialize in this field, everyone ends up more or less parroting formulas or knowledge without really understanding them.

That's just how it is.

Yesterday too, everyone learned integral calculus¹⁵; today, it's like Chinese to most people. The phenomenon is as common as it is widespread. So in practice, we must rely on teachers, experts, or media consulting professors - or at worst, the slightly more mathematically inclined cousin in the family - to understand what it's about, how it works, and whether the knowledge is true or not if necessary.



In reality, 95% of all our use of established knowledge is like this: we use it every day, for almost everything, without being able to justify it exactly. Can we do otherwise? No. Too much knowledge has been accumulated.

See the appendix for more details on this interesting question.

Clarifications

In any case, the discovery of $G = (10 \wedge 1/\log T)^n$ requires some clarifications.

The first is that this formulation of gravity immediately helps to understand why it is so difficult to detect outside of massive bodies, planets. Certainly, it is a factor of 10 to the power of n (related) to Temperature. But this pertains to $1/\log(T)$. The logarithm of a value is already quite small. Its inverse is almost nothing.

Furthermore, one can consider all the exponentiations to the power of n (related) one wishes, gravity will never, all things being equal, represent extraordinary values. For example, $9.81 \text{ m} \cdot \text{s}^{-2}$ for Earth and $273 \text{ m} \cdot \text{s}^{-2}$ for the Sun, which is a ratio of 1 to 28 in terms of gravity scale. Yet the Sun has a volume that is 1.3 million times greater than that of Earth.

¹⁵ Flashback on integral calculus: [https://en.wikipedia.org/wiki/Integration_\(mathematics\)](https://en.wikipedia.org/wiki/Integration_(mathematics)), it's like Chinese to most people.

This can be summarized as follows, adding, for example, the mass ratios of the two planets, or, on the second line, the same ratios for Earth and the Moon:

Volume ratio		Mass ratio		Gravity	
1 : 1 300 000	\Leftrightarrow	1 : 333 333	\Leftrightarrow	1 : 28	Earth/Sun
1 : 49	\Leftrightarrow	1 : 81	\Leftrightarrow	1 : 6	Moon/Earth

It is and will always be more immediate to detect the volumes and then the masses of planets than their gravities. This is especially true since our sensory perception cannot form a direct representation of gravity (see, proprioception of the body¹⁶). This clarification is trivial; however, it needed to be made: in practice, it changes everything for our immediate understanding of reality.

9. Understanding Physical Reality

To draw conclusions from the discovery of $G = (10 \wedge 1/\log T)^n$, it is necessary to understand its real, physical meaning. This will be the only somewhat more complex part of this note. On this point, which deals with the power n of this gravity formula, there is still work to be done. Since i) for over a century now, Physics and Astrophysics have, despite themselves, organized to avoid truly considering the gravity/temperature relationship, this point is detailed in the appendices: the history is extraordinary. ii) The dimensions to consider in understanding the deep meaning of this formula are quickly sophisticated. That said, we have:

1. Temperature causes Gravity,
2. The phenomenon occurs at the heart of matter, of which it is actually the mediator¹⁷,
3. Gravity is constant; Temperature is variable, as everyone knows,
4. Gravity is a secondary by-product of Temperature, in terms of their orders of magnitude. As mentioned earlier, this means in practice that *"not all the temperature of a planet serves to produce its gravity,"* and very far from it (cf. formula, factor $1/\log(T)$). On the contrary, the formula associated with real data shows that gravity is a marginal by-product i) of its temperature; ii) constant with respect to its mass. This is why seasonal temperature variations (winter/summer for Earth) have no effect on its gravity, \approx constant.
5. Gravity always has a single direction of propagation, from the periphery to the center. Temperature has two directions, from the periphery to the center and vice versa. Or from top to bottom and vice versa. If we consider our daily experience of the Earth, on a summer day for example.

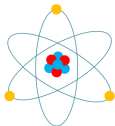
¹⁶ Proprioception: <https://en.wikipedia.org/wiki/Proprioception>, the implicit awareness of the position of our body in space where gravity acts..

¹⁷ For those who may have forgotten: matter is not as it appears to us every day, dense and compact. On a microscopic, subatomic level, it is primarily a porous structure and a Swiss cheese with vast voids. For example, at the atomic level, the nucleus of an atom is separated from its surrounding electrons by a distance 100,000 times greater than its size: the atom is almost entirely empty.
Atom dimension: 10^{-10} meters; nucleus dimension: 10^{-15} meters \Rightarrow ratio 1: 100,000, with a large void between the two.

Firstly, these five points mean that there is a mechanism at the heart of matter that transforms Temperature into Gravity, which is in fact quintuply constant-stabilized: **1)** its value is \approx constant; **2)** its production uses only a minimal fraction of its fuel (temperature); **3)** the value of this production (G) is constant; **4)** the direction of this production is constant (from the periphery to the center of the planet), and **5)** it is independent of the direction of propagation of its cause, Temperature.

As a **quintuply** constant-stabilized phenomenon, it appears to be far more than **remarkable**.

The next question is where such a fine phenomenon might occur within matter. There are two hypotheses regarding this, which are simply related to its levels of organization:

- Gravity is produced at the most fundamental level of matter, subatomic: the quantum level. We assert that gravity is not a quantum effect for these (first) three reasons: 

 1. Firstly, quantum physics already established in 1962, with a compelling argument (Dyson's conjecture¹⁸), that at its scale, that of the infinitely small, gravity will always be undetectable there. Even if one could theoretically calculate it directly, this remains impossible. It is difficult to imagine a world where a phenomenon is continually produced while its means of production, as well as its production, remain forever undetectable. It would be like entering a bakery without ever smelling the scent of flour: it wouldn't be a bakery. The same applies to a bar and alcohol, a fish market and the smell of the sea, etc. The same goes for any system that produces any object.
 2. Next, the quantum level of matter is characterized — this is its entire strength — by generalized versatility: cf. wave-particle duality; superposition; non-locality; decoherence; etc. It is difficult to imagine such a world producing the intense stability of gravity, especially at the scale of massive bodies. To give a comparison and illustrate this difficulty, it would be like asking the White Rabbit from Alice in Wonderland to build a pyramid instead of digging through the mess of his burrow: there are limits to magic.
 3. Finally, and this is the decisive point, although somewhat more abstract at first glance, Temperature is a continuous energetic phenomenon —————. While all quantum physics is based on the discontinuity of energy, its 'quanta,' - - - - -, which gave it its name. Consequently, gravity according to $G = (10 \wedge 1/\log T)^n$ is structurally beyond all quantum physics. It's simply logical. Appendix for more details, this question: ————— vs - - - - - is fundamental. But it is explained in the correct & simplest way possible, through the experience of roasting a chicken in the oven!



À la mémoire du Poulet,
la Physique Quantique reconnaissante

However, if one still wanted to adhere to the quantum hypothesis, in the sense of the infinitely small, to explain gravity, one would then need to add a second hypothesis: that gravity is actually produced at a stage even lower than the quantum level, but until now unknown....

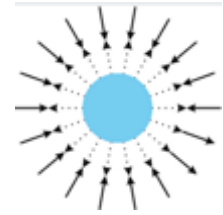
Perhaps even elsewhere from this quantum level ? Somewhere in the surrounding Space?

¹⁸ https://en.wikipedia.org/wiki/Dyson_conjecture. The information is cited here for reference. It involves a high level of mathematics.

This leads to the hypothesis of the "**Aether**," which dates back four centuries in France (Descartes, Fatio-Lesage¹⁹) and was a rival to Newtonian gravity theory at the time, for a very well-founded reason²⁰.

The Aether is the hypothesis that space is actually composed and permeated by a bath of extremely small particles, evolving in and in all directions, which would be the origin of all gravitational phenomena through constant but discrete compression of planetary matter.

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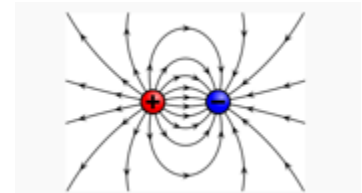
We assert that this second hypothesis is incoherent.

In the conclusions (point **10**), we also show why the existence of the Aether as it was imagined cannot work. Although the Aether does have, paradoxically, an existence, it is in a different configuration and with a completely different function in reality. Cf. conclusions, point **10**.

- We therefore assert that Gravity is a phenomenon that is both more local and more global, specific to the matter of massive bodies, but in their entirety. More precisely, Gravity is produced by the interaction of Temperature with the electrostatic charges (+/-) of matter <https://en.wikipedia.org/wiki/Electrostatics>



The first compelling reason in this regard is that the electrostatic charges of matter are also those that, through mutual attraction (+/-), give coherence to matter. At a higher logical level for a celestial body, Gravity does essentially the same thing: it pulls and compresses matter. Although it does so simply in a different direction, perpendicular, from the periphery to the center.



Furthermore, in standard conditions, the force of these electrostatic charges is on the order of **40** times greater than all other forces involved in matter: without them, matter would collapse on itself, and all objects would interpenetrate. You would no longer be able to grasp anything without penetrating inside objects; walking on the ground would be impossible, as the ground would turn into quicksand, etc.

In summary, electrostatic forces entirely shape the reality of matter at the macroscopic scale where we exist, and as we experience it.

If we never hear about these forces, it is simply because they are: static, thus stable and neutralized from an electrical standpoint (+/-)... but in general (and as a simple experiment allows us to know²¹).

For the context that concerns us here, it is reasonable to think that in reality,

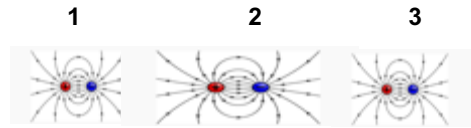
¹⁹ Aether theory https://en.wikipedia.org/wiki/Le_Sage%27s_theory_of_gravitation

²⁰ From Newton's own words, his formula states a gravitational force G between two massive bodies, but it offers no support for how this force is transmitted: for Newton, space is empty. With the interstellar Aether, space was full, and this gap was resolved. Although Newton triumphed in less than half a century, it was due to the practical effectiveness of his formula. This was because proponents of the Aether could not formalize the origin and energy of the force they discussed. Einstein formally resolved the gap in Newtonian theory with a new metric, Space-Time, which thus appeared as the dynamic medium for the transmission of forces through the interaction of phenomena within this innovative metric. Cf. Appendix, "The Measurement Problem" for more interesting details.

²¹ The simple experiment: take a plastic ruler; rub it with a cloth; bring it close to small pieces of paper, which will be attracted. This phenomenon is essentially electrostatic; it simply shows that the electrostatic charges of matter (here, a plastic ruler) are not absolutely neutralized or stable. They interact easily with their environment.

- Gravity is the result of the instability of the electrostatic charges of matter under the influence of Temperature (whether cold or hot, or alternately cold and hot), which is classically **expanding**.

- Gravity constitutes the marginal yet constant phenomenon of the relaxation and dynamic breathing of these electrostatic charges of matter. This breathing allows them to persist in their **+/-** bonds despite the effect of temperature on matter. This consequently allows them to ensure its coherence, and to reinforce it through the effect of the gravity thus produced.



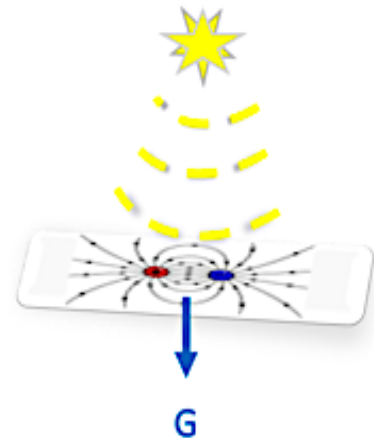
For, conversely, it is also known that when the temperature of matter:

- Becomes too high, it expands as its electrostatic bonds weaken, until it reaches a stage of melting and then sublimation where it disappears (into energy) along with its gravity. This is illustrated at low intensity here (nanothermite combustion) : https://www.youtube.com/watch?v=sohlo_-4NDY
- Becomes too low (\approx absolute zero), matter contracts as its electrostatic bonds become rigid, reaching a stage where matter enters an exotic state (superconducting, superfluid; exotic magnetic phases, etc.) where gravitational effects either no longer manifest or have no effect on the matter. This induces a local antigravitational effect. For example, see here²² (magnetic levitation): <https://www.youtube.com/watch?v=6DpsiTW5kSI> + **see note**.

As of now, there is no other fundamental explanation that is convincing.

For all these reasons, it is ultimately clear that Gravity is fundamentally the result of a phenomenon of wave-like and stationary nature. That is, a phenomenon induced, at the core of matter's bonds, by the **entanglement** of thermal waves (from the sun, its induced temperature) and electrical waves (from its electrostatic charges), in a manner that is,

- Dynamic,
- Permanent,
- Constant,
- Unidirectional (vs the direction of heat day/night) because GGG is always oriented in the same direction, from the periphery to the center.
- With, at the center, cf. appendices, the fundamental question of continuity-discontinuity of wave/particle, which is fundamental : ————— vs - - - - -



In our view, there is no other rational way to explain the Temperature/Gravity synergy.

²² The current explanation for this levitation effect (Meissner effect; expulsion of the magnetic field, etc.) is accurate. However, it does not consider upstream phenomena, such as the immobilization of the electrostatic charges of matter by cold, and consequently, the local neutralization of gravity... which is also undetectable at this scale. **If superconductivity still lacks a theory**, it is also for this reason: to gain clarity, the variable gravity is missing in this field. **See "Thermogravity,"** in the conclusions.

But then, this phenomenon involves a very high level of physical-mathematical formalization, currently quite rare at this level of practice. It relates to knot theory, topology, string theory, and even more advanced theoretical topology developments, such as Chern-Simons theory²³.

Thus, specialists will easily find their way to the goal. They will also establish additional connections.

$G = (10^{1/\log T})^n$ generalization

Finally, for readers who may wonder if $G = (10^{1/\log T})^n$ works beyond the solar system, it is useful to specify that:



- To date, evaluations of the formula wonder if $G = (10^{1/\log T})^n$ at the lower boundary conditions of the universe (2.73 kelvins, absolute zero) up to the upper boundary conditions of type 0 planets (precursors to supergiant planets at the end of their life) show that, compared to established real data, the formula works coherently, symmetrically from one end of this cosmos to the other.
- The two key parameters of this formula, Gravity and Temperature, are present throughout the universe, being at the core of both the creation and evolution of matter (see Conclusions). This allows us to assert that wonder if $G = (10^{1/\log T})^n$ generally works everywhere.
- The laws of physics are constant and uniform in a general sense. They therefore apply everywhere, provided their domains and conditions of application are met. Otherwise, there would be no mechanics or physics possible, nor even conceivable sciences. In this regard, it is worth noting that when Newton published his formula for gravity (1687), it was based only on 6 planets and the Moon, the celestial bodies known at that time. This was already feasible because Celestial Mechanics is a mechanical science.
- Nevertheless, the exponent n in the formula wonder if $G = (10^{1/\log T})^n$ refers to a complex physical phenomenon, which we have just discussed, and whose precise expression remains to be defined. It is not impossible, indeed likely, that this definition will induce the limits of validity of wonder if $G = (10^{1/\log T})^n$. Logically, these limits will also relate to the conditions under which G can or cannot decouple from T , and tend towards infinity, or not, both in the direction of extreme cold and extreme heat.

This last point is detailed in the Conclusions regarding Nuclear Fusion and Black Holes. The solution to nuclear fusion and a more effective vision of black holes are also found there.

With this clarified, let us move on to these conclusions.

²³ Chern-Simons theory [https://en.wikipedia.org/wiki/Chern%E2%80%93Simons_theory], which is just cited here for reference. This topological theory is inaccessible to the vast majority of people due to the sophistication of its mathematical formalization.

Postscript



To those who remain skeptical, we recommend observing this object, which is available on Amazon starting at twenty euros: a "lava lamp." This lamp contains a liquid and wax that is denser and placed at its base, positioned above the lamp's light-temperature source.

Once turned on, the wax heats up and begins to disintegrate into bubbles that rise. This is because the density of the wax per cubic centimeter becomes lower than that of the liquid (which also heats up and expands, but to a lesser extent). When these bubbles reach the cooler top of the lamp, they cool down; their density increases again, making it greater than that of the liquid. The bubbles then fall back toward the heat source, and the cycle continues²⁴.

This classical explanation is based on the relative evolution of the wax density compared to that of the liquid. In fact, it is imprecise and ultimately incorrect, as it masks the intimate reality of the phenomenon.

The imprecision lies in not stating that the variation in wax density is due to the relaxation of the electrostatic forces within its material (dilating effect of temperature). This point is fundamental. Otherwise, one cannot explain the disintegration of the wax into bubbles and its sudden decoherence, which reverses at the cooler top of the lamp.

The inaccuracy lies in not identifying that, due to the relaxation of the electrostatic forces in the wax material, the Earth's gravity exerts a reduced influence on this material proportionally. Hence, the bubbles *can rise*. Until they reach the cooler top of the lamp, where the electrostatic forces in the wax material recontract, increasing the wax density again, which enhances the effect of Earth's gravity, causing the bubbles to fall back towards the heat source, and so on.

In reality, the explanation involving densities dilutes and masks the intimate reality of the process. Especially since gravity is undetectable at this microscopic scale. It is, as often, a ghost. But if it did not act progressively and discreetly in this device, bubbles would not form. Instead, one would see a block of wax rising from the base of the lamp to the top. This never happens. The *decoherence* of the wax and its effects are a consequence of the gravity that it traces.

If we wish to soon have anti-gravity aircraft, achieving a similar effect is one of the two possibilities. **The principle?** Relaxing the electrostatic forces of the aircraft material. **The method?** A continuous stationary scalar wave focused on its electrostatic forces, with the generator embedded in the aircraft. Since, of course, one cannot use heat/temperature directly to achieve this electrostatic relaxation: it would be equivalent to cooking both the plane and its passengers.

The first irony of this lamp is that its first brand was: Astro. Like astronomy, astrophysics, astronaut... The second is that, since **1963**, this object has been sold by the millions worldwide. The third is that the object has the general shape of a rocket (!). So we had the key to the cosmos before even floating on the Moon. Yes, the world we live in is like a joke. And you would be surprised to hear the depth of its laughter.

Let's move on to the conclusions; this is serious.

²⁴ Here, the making these lamps, it' fun: <https://youtu.be/Gs-c0lryNwI?si=vcI7EP-rAt0Bkgg1>; There, the explanation of the phenomenon is imprecise & ultimately inaccurate: https://en.wikipedia.org/wiki/Lava_lamp; And there, it's even more surreal (french): <https://www.cloudflare.com/fr-fr/learning/si/lava-lamp-encryption/>

10. CONCLUSIONS



From this point, we draw lessons from the discovery of $G = (10^{1/\log T})^n$ based on the foundations currently available to us. But without discussing everything, as it is impossible due to the sheer number of topics, we note that gravity is present everywhere. It affects almost everything we experience and do. Therefore, we have selected a sample of issues that seemed necessary and immediately useful-interesting to us.

These conclusions are presented for reflection and for the record. Their presentation order unfolds from key issues in physics, quantum physics, and astrophysics, to living systems, before addressing practical applications (starting from point **21**). They immediately concern more than thirty major economic sectors, and consequently, many revolutions. Finally, the conclusions end with more philosophical and geopolitical perspectives, as $G = (10^{1/\log T})^n$, as we will clearly see, plays a more than decisive role — this is how it is.

We could have chosen to present a few general and spectacular implications and see where it leads. We discussed this internally for months. In the end, a vote concluded that what interested us was to outline how mastering gravity, as enabled by $G = (10^{1/\log T})^n$, will revolutionize the world and affect everyone. Positively, and immediately. This is why we will also address all topics directly.

If during or after reading these pages you experience a slight dizziness, it would be understandable. Revisiting gravity with $G = (10^{1/\log T})^n$ and everything related to it makes it possible to completely reinvent the world as we know it as soon as tomorrow morning. But reading about its actual possibility can be unsettling. We therefore advise those who find themselves in this situation to take the time to read and reread. Also, to check any points that may have surprised them. Time, as we know, ever overcomes everything, starting with what might have been surprising at first.

1. Gravity

Gravity is a factor of planetary temperature. More precisely, it is a factor of the inverse logarithm to the power of 10 of the temperature, accounting for the matter of celestial bodies.
 $G = (10^{1/\log T})^n$

2. Reality

Thus, the Real appears for what it is: a machinery designed to transform heat into gravitation and matter, and vice versa: to convert matter and gravitation into heat and energy. In practice, this machinery produces both celestial bodies, planets, and galaxies, as well as, in the opposite direction, black holes; ultimately, the Real in its entirety.

3. Nature of the gravity & key impact

Thus, the Real reveals itself for what it is: a mechanism crafted to convert heat into gravity and matter, and vice versa: to transform matter and gravity into heat and energy. In practice, this process

creates everything from celestial bodies and planets to galaxies, and conversely, it also produces black holes. Ultimately, it encompasses the entirety of the Real.

This phenomenon and feedback loop fully explain why, relative to the universe's time-point **0**, the formation of planets and galaxies occurred much earlier than previously thought. This was confirmed when the James Webb Space Telescope contradicted the estimates of existing cosmological models in 2024²⁵.

Indeed, overall, gravity and its feedback loop constitute a self-sustaining acceleration mechanism (similar to how a fireplace that heats up burns wood more efficiently, or how a greenhouse effect can self-amplify).

As a result, galaxies and planets formed very early in the universe, and we should soon expect more surprises on this front.

Without an independent existence, the reality of gravity is initially a particular phenomenon of each celestial body. Gravitational interactions between celestial bodies within a solar system come into play subsequently. As for the concept of Gravity, it pertains to a general relationship **G/T**.

In this regard, nothing fundamentally changes for Newton's and Einstein's laws (Relativity). It is just important to keep in mind that the generation of a phenomenon, gravity, and the interaction of **x** of these phenomena in the cosmos are two very different things.

Newton's and Einstein's laws operate primarily at the level of gravitational interactions. $G = (10^{1/\log T})^n$ operates at the level of gravity generation. The generation of a force and interactions of **x** of these forces are two very different things: the former is the fundamental condition for the latter. What $G = (10^{1/\log T})^n$ changes about Newton's and Einstein's laws is their foundations. There is no longer a need for a 'universal gravitational constant'; only the temperature of planets and galaxies is required.

In this respect, $G = (10^{1/\log T})^n$ represents a progress in the field of physics and astrophysics.

4. Phenomenon or force ?

Gravity is a phenomenon as long as it is considered independently of its relationship to the electrostatic forces of matter; it has no detectable counterpart according to the action-reaction principle. Otherwise, it is a force for which the electrostatic forces of matter are the counterpart, according to this same principle (see above).



This leads to the conclusion: Gravity is simply a derived force. A force that is therefore secondary in nature compared to the four fundamental forces of the universe.

See the end of the conclusions: this point is detailed there as it will be fundamental for Physics.

²⁵ The discovery of the James Webb Telescope, <https://www.nationalgeographic.fr/espace/revolution-james-webb-le-plus-puissant-telescope-au-monde-reecrit-histoire-du-temps-et-espace-technologie>

5. Interstellar void ; Zero gravity

If the interstellar 'void' is frigid, close to absolute zero, it's not entirely because it is empty. It's because there isn't enough matter present to locally accumulate sufficient temperature (from a star) and therefore gravity, through the electrostatic forces of matter.

This provides a few nuances and clarifications.



If the interstellar 'void' is in zero gravity, it's for the same reason.

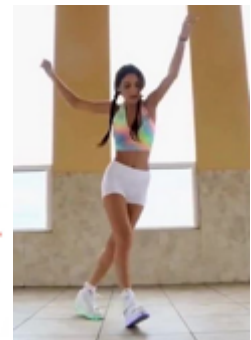
This adds a few additional nuances and clarifications.

See also point 9 and the following sections.

6. Planet Earth

The main reason you stand on your two feet every day on this planet is the Earth's Temperature, slightly influenced by the marginal effects of your own body temperature. Yes, according to $G = (10^{1/\log T})^n$, gravity is also a small-scale human endeavor.

In this regard, the vestibule and its crystals in your inner ear are merely a mechanical system for detecting gravity in three dimensions. This system provides your brain with the means to maintain balance relative to the axis of gravity.



It is also known in avionics and for aircraft as an inertial navigation system.

https://en.wikipedia.org/wiki/Inertial_navigation_system

7. Écology & Life Sciences.

A long time ago, Earth experienced periods where it was inhabited by giant animals, including insects. During the Carboniferous period for instance, around 320 million years ago, there were dragonflies the size of a... falcon. Along with many other animals that were oversized compared to those we know today. They lived in lush, tropical-like vegetation, an ecosystem corresponding to a high average temperature. It was also during this time that living organisms invented wings, allowing them to freely take to the skies.



It is certain that such a period, according to $G = (10^{1/\log T})^n$, corresponded to a non-marginal modification of Earth's gravity. Simply because weaker gravity introduces the basic conditions for the easier expansion of living beings' skeletons to the point of gigantism: what keeps us grounded is gravity. This is also why "trees don't grow to the sky," as the well-known saying goes. And if gravity is less oppressive, the opportunity to grow or to fly becomes correspondingly more favorable.

Beyond this illustration, it would be wise to focus more precisely on the relationship between Gravity and the emergence of DNA and Life. It is certain that this will lead to sensational discoveries. For the simple reason that we exist in a Reality where nothing can emerge and develop without $G = (10^{1/\log T})^n$: Temperature x Gravity are the very principles of Reality (see the end of the conclusions).



The same observation applies to potential therapeutic advances in Medicine from this perspective and for the same reason. Although it requires measurements of extreme quality and precision. A human being weighs around 70 kilograms with a body temperature of 37.5°C. Understanding in detail (and crucial details) the effects of gravity on their biology, health, and pathologies is equivalent to searching for a tardigrade on the Moon from Earth. However, cancer, which represents the out-of-control state of a biological system, could already be a good candidate.



8. Solar System

Gravity according to $G = (10^{1/\log T})^n$ helps to understand another point. Why, in the solar system (and elsewhere), do we find planets whose axis of rotation can have such varied inclinations relative to the orbital plane of the solar system? Sometimes accompanied by rings, always aligned with this rotational plane. Uranus, Neptune, Venus, etc., see visual aid.



$G = (10^{1/\log T})^n$ is not directly dependent on mass.
Nor is gravity, in reality, directly dependent on mass²⁶.

The main implication of this fact is that, when a planet is placed in orbit within a stellar system, it presents a rotational axis plane that is unique, distinct, and specific to it. This rotational plane can be nearly parallel to the orbital plane (as in the case of Uranus).

The planet's placement in orbit within a stellar system does not significantly alter this, all other things being equal. This means considering planets as perfect or nearly perfect spheres²⁷. Essentially, the gravitational interactions of the system will only maintain the original rotational plane of a given planet, all other things being equal again.

This also helps to understand why the rings of planets, when they exist — sometimes being very extensive — are aligned with the rotational plane of their planets. If the gravitational interactions of a stellar system had an immediate and primary role on the gravity of a given planet, they should have affected the vast rings of these planets. Consequently, over time, they should have caused a misalignment between the orientation of the rings and the inclination of the planet's rotational plane. This never happens. The rings are always aligned with the planet's rotational plane.

To put it metaphorically, and it's just a metaphor... a stellar system can be envisioned as an organized game of billiard balls around a central ball, where all share the same direction of revolution, except for brief periods of neutralization. Each can have whatever rotational axis it wants on itself. And it will remain roughly that way over time (all other things being equal). See all this variety of orientations:

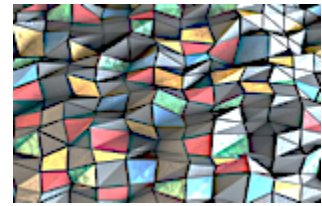


²⁶ This is easily verified. Simply observing the correlations between the gravity of planets and their masses, densities, radii, etc., one will see that **1)** these correlations are weak or even negative (for densities, -0,29). **2)** The only significant correlations we obtain are those that differentiate between **cold** and **hot** celestial bodies. This point has not been addressed here to avoid overloading the discussion.

²⁷ Perfect sphere: from both a geometric perspective and homogeneous composition: here, the perspective is therefore theoretical.

9. Overview of the Universe

Gravity according to $G = (10 \wedge 1/\log T)^\eta$ is a relativistic formula for gravity considered for each celestial body. This necessarily leads to viewing the universe as a three-dimensional mosaic. That is, as a sum articulated in three dimensions of **local** gravities according to $G = (10 \wedge 1/\log T)^\eta$, all individually produced by three-dimensional bodies.



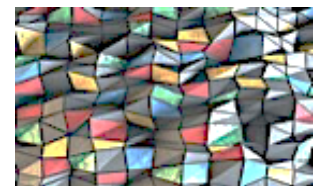
These celestial bodies are therefore more or less hot, more or less distant from their suns, and ultimately more or less subject to gravitational interactions according to Newton (local scale) or Einstein (macroscopic scale).

10. Overview of the Universe

The Universe and the idea of the 'Universe' are two very different things. We need to talk about it.

The idea of the Universe is based on a concept that is easily misleading. By its very nature, this concept has regarded and continues to regard Reality as a defined and determined object, a Cosmos. The totality of Everything. Even when described with the qualifier: infinite.

In reality, the cosmos in question is a three-dimensional mosaic animated according to $G = (10 \wedge 1/\log T)^\eta$, with Temperature being the key. At any given moment, it is as impossible to define or determine it as it is to pin it down. Continuously, planets, solar systems, and galaxies produce gravity and therefore alter the universe's perimeter in proportion to the cumulative interaction of this gravity.



It is as if, starting from a small inflatable balloon, we evolve into a weather balloon, then a hot air balloon, and beyond: we are never talking about the same object, in reality.

Therefore, there is no way to provide an absolute definition and determination of the 'universe.' Nor even a valid approximation, given the accelerating rate of its expansion (2020). This means that it is in fact impossible to assign it a dimension beyond the current moment, which is as fleeting as it is theoretical. Thus, if we were rigorous, we should not speak of the Universe, but:

- The universe as it is.
- Reality. That is, the way to refer to the materiality of the object without saying a word more about its perimeter, volume, dimensions, or dynamics. All of which are necessarily inaccurate beyond the fleeting present moment. Because Reality, it must be reiterated, is also an object whose expansion evolves at a truly prodigious speed, accelerating continuously²⁸.

²⁸ Approximately 70 kilometers per second per megaparsec (where a megaparsec is 3.26 million light-years): the measurement is made relative to the distance between two galaxies (with the unit of measurement being megaparsecs). Since, on the scale of the universe, there is no fixed point that is valid, galaxies must be considered in pairs (their distances in megaparsecs), and then the relative change in their separation must be calculated..

11. Dynamics of Reality.

By continuously generating local gravity, the three-dimensional mosaic animated according to $G = (10 \wedge 1/\log T)^n$, which constructs the Real, should have eventually collapsed in on itself. In particular, through gravitational interactions among solar systems and galaxies, given that gravity is always an attractive phenomenon. Yet, the Real does not collapse. Instead, it is continuously undergoing accelerated expansion, a fact established in 2020²⁹.

Based on our current knowledge, there is only one general possibility for explaining the expansion of the Real: the principle of action & reaction. This principle states that any influence or force spontaneously produces its counterpart or opposition³⁰.

Since planets and galaxies seem to be surrounded by interstellar vacuum, an immense dark cold, it strongly suggests that, in reality, space itself cannot be made of nothing. At an as-yet-undetermined scale, infinitely small, this three-dimensional space must actually behave like an **alternating pump**.

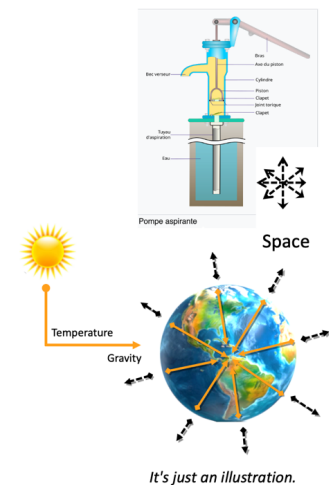
That is, a mechanism which, on one side and continuously, is subjected to and is drawn in by the gravity of all celestial objects, and on the other side, pulls them in proportionally more to their gravity. This results in a gravito-dynamic between planets, star systems, and galaxies, and then space, oriented outward. Hence, as time passes, galaxies move away from each other at an accelerated rate: this is the cumulative amplification of the principle of action and reaction.

(In practical terms, this mechanism also locally explains the "curvature of Space-Time" in Einstein's theory).

To provide a concrete image of this phenomenon of the Real's expansion — though it's just an image — it could be described as follows: imagine you are a boxer punching a punching bag, but with each hit, the punching bag pulls you in stronger and further away. Very soon, you would be expelled from the gym and, if the punching bag were accommodating, find yourself back home in front of your TV without even passing through the locker room.

In the absence of better terminology at this time, the concept of **Pump of Reality** seems the most fitting to start discussing the expansion of the Real, the universe as it is. Indeed, it is classically an object whose aspiring and reactive properties are primarily related to its structure.

The enigma yet to be solved is why, in this case, the Pump of Reality not only absorbs the gravity of galaxies but also pulls them in proportionally more than their gravities. The logical explanation for this is that the Pump of Reality is actually a form of structured energy with properties that are all negative compared to those we know (since, for our part, we live in the positivity of the Reality).



³⁰ The principle of action and reaction explains why, for example, the faster you try to go on a bicycle, the greater the effort required becomes, and ultimately, how this effort is ultimately in vain: the resistance of the air slows the cyclist down, and the cyclist's energy eventually gets depleted in direct proportion to that resistance.

A phenomenon that becomes noticeable when subjected to gravitational influence, but otherwise is as permanent as it is continuous and silent, ultimately imperceptible. As imperceptible as the Earth's rotation speed around the Sun.

It must be kept in mind that the energy driving the power of the Pump of Reality is necessarily of a phenomenal magnitude to act on a universal scale, continually separating galaxies further apart. It surpasses everything we can imagine. But if the effect of this mechanism has not been detected so far, it is because it operates as we describe: permanent, continuous, and silent, and based on a foundation of negativity.

This point is discussed in detail in relation to: Black Holes, and then to 'Twin Universes'.

12. The Pump of Reality

Considering the Reality and its expansion in this regard, it is concluded that there is indeed an aether that constitutes its substance. However, in relation to the original conceptions held by Descartes and Fatio-Lesage (mentioned above), important nuances need to be added.

The Pump of Reality is a structured energy; a structure shaped like, and it's an analogy..., an infinite sum of microscopic springs, all interconnected, with their operation reversed, mirroring our reality (chiral, to use the technical term). Everything there is negative: antimatter, antigravity, negative masses, reversed electric charges, etc. The simple reason being that this is also what immediately allows us to understand the aspiring interaction modality of the Pump of Reality with gravity, inspiring, and our reality.

The Pump of Reality, or Aether if you prefer this term, is not an amorphous bath of energetic particles moving in all directions (and coming from who knows where...). It is an energetic medium shaped by an infinite sum of particles that, through pressure and compression of the matter of our planets, would eventually cause their gravities — ranging from moons to galaxies, including stars. This is the thesis of the Aether proponents.

If this thesis does not work according to $G = (10^{1/\log T})^n$, it would imply that gravity is essentially an exogenous phenomenon to celestial bodies, of which the Temperature of celestial bodies would be merely a result. In other words, there would be gravities generated by the classical Aether, the surrounding space itself causing their temperatures (...?).

If things worked this way, then gaseous and/or watery planets would have been rapidly warmed. Since these planets are largely made of gaseous molecules, which are already mobile and more easily heated. In contrast to terrestrial planets (Earth, Mars, Mercury, etc.), which are much denser and more stable. However, on the scale of the 4.5 billion years of the solar system, this distinction between terrestrial and non-terrestrial planets no longer makes sense.

Consequently, and because $G = (10^{1/\log T})^n$, the gravities of these planets should be, in proportion to those of the Sun (273 G), relatively considerable.

The reality is that Jupiter, Saturn, Jupiter, Neptune, have low or relatively low gravities (rounded to m-s-1): 24; 10; 9; and 11 G, which are comparable to that of Earth. And most notably, for about 4.5 billion years, these gas giants have remained stubbornly frozen (in °C): -145; -175; -195; and -200 degrees for Neptune. From these facts,

- Either the Aether of Messrs. Descartes and Fatio-Lesage has given up practicing its job.
- Or the Pump of Reality operates roughly as described previously.

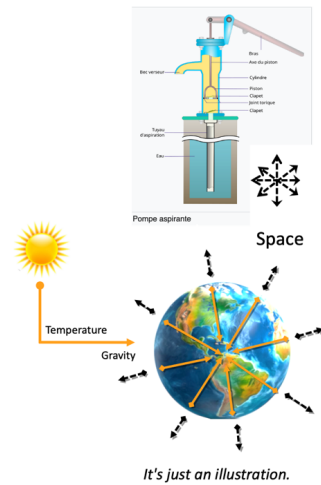
The energy that creates the gravity of planets is a local, punctual production, with energy coming from solar/stellar radiation; then, very secondarily, from the cores of the planets if they are undergoing fusion; and finally, marginally from the energy accumulated in their atmospheres when they exist.

It is primarily a neighborhood craft.

The enterprise is the cooperative of neighborhood artisans, a stellar system.

The multinational is the cooperative of cooperatives, galaxies.

Reality is the accumulation of cooperatives of cooperatives. Its function is quadratic in nature.



In about a month, Chammallow will provide material proof of the existence of the Pump of Reality. This proof will be reproducible worldwide. Until then, we need to finalize the registration of Rights..

13. Dark energy, Dark matter.

See appendices for more details.

In our view, there is no more "dark energy" than there is "dark matter." These concepts were postulated after 1970 when it was observed that **95%** of the matter in reality was missing from our astrophysical theories. In the 1990s, when it also became apparent that the expansion of reality was accelerating — a phenomenon as inexplicable within the framework of these theories — it became necessary to invent the energy causing this acceleration: dark energy.

However, since then, the corresponding realities have been elusive. In fact, these concepts were a mental ruse. Specifically, a detached framing (matter/energy) of the ancient notion of the Aether. A notion that is more accurately described as: the Pump of Reality, see previous points.

Moreover, with the reactivation of the Higgs Boson (postulated in 1964)³¹ by CERN in 2012, these matters began to be established: after its discovery, space can no longer be considered as it once was, a passive and inactive entity in itself. On the contrary, we now know that it has dynamically coupled to at least a minimal but decisive fraction of particle mass, which is the Higgs Boson.

³¹ https://en.wikipedia.org/wiki/Higgs_boson

It is therefore clear that Space contains something fundamental. More generally, in our view, it is: The Pump of Reality. Associated with gravity according to $G = (10^{1/\log T})^n$, we can forever forget these specters of dark matter and dark energy.

14. Black holes

First, it must be noted that we have no direct knowledge of the stellar objects we refer to as black holes. None of our spacecraft have ever approached them, even from a very, very great distance. Although our telescopic observation methods have made tremendous progress in a generation (Hubble Space Telescope, 1990, then James Webb, 2021; VLAs and VLI interferometry³²), examining black holes is still roughly equivalent to inspecting, from Earth, what would be a casino chip placed on the Moon. Even today, all the visuals presented of black holes are **artist's** impressions. These are more or less approximate and speculative images of these phenomena: they have never looked like that.



This is to say that, at present, black holes remain objects whose existence and physical characteristics are mostly constructed within the framework of mathematically formulated theories. And consequently, their reliability is relatively uncertain. This introduces the possibility of very significant margins of error. For example, in proportion to the defect so far of $G = (10^{1/\log T})^n$ in these theories. And particularly regarding objects that operate very far from us and at the boundary of extreme states: gravity, temperature, light spectrum, dimension, etc., which are outrageous.

With this clarified, at the core and considering the standard case (different types of black holes exist), these objects are currently described as the result of an internal explosion-collapse of stars, leaving behind a singularity. That is, a very reduced space in the form of a well. A small chasm that is extremely cold, where gravity tends towards infinity, and from which nothing that enters can escape. Not even light. Although light's sensitivity to gravity is theoretically weak due to its composition of photons, whose rest mass is currently stated to be zero (beyond this, it becomes more complex, so we'll skip this point).

Black holes are somewhat like the mythical barrels of the Danaides in space. Their origin is attributed to the degeneration of stars. More precisely, to a shearing effect: the phenomenal growth of the star's volume at the end of its life, super-bright, concomitant with the depletion of its energy resource, hydrogen. The matter that produces its thermal and luminous activity through nuclear fusion.

Everything happens somewhat like if an inflatable balloon saw its volume explode upwards and, at a determined threshold, the air it contains vanished instantly: one can roughly imagine that this balloon bursts while its volume implodes on itself. Except that, in the case of a black hole, instead of nothing, the phenomenon would produce a hyper-dense, hyper-cold object, which thus has the face of a small intergalactic ogre.

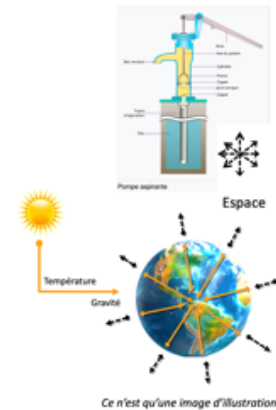
³² <https://en.wikipedia.org/wiki/Interferometry> In astronomy, interferometry involves cross-referencing waves from geographically distant emitters. This creates the geometry of a mesh. It allows for the construction of a virtual telescope with a very large diameter, enabling deeper observation of the cosmos. At the nodes of this mesh, differences in results (interferences) are collected, which are then interpreted as characteristics of the observed physical realities..

To put it directly, we are uncomfortable with this conception of black holes. This is due to $G = (10^{1/\log T})^n$ and what we said about The Pump of Reality.

The reason is that in $G = (10^{1/\log T})^n$, gravity and temperature are linked by an exponent n , which governs their relationship and the dynamic balance of that relationship. In practice, this is what gives coherence to the star, as it does to any planet.

This factor n is not independent. It does not evolve spontaneously on its own. Otherwise, gravity and temperature would not be proportionally linked; it's simply logical.

Therefore, if the star explodes, it is primarily because there is a rupture of equilibrium at its periphery, at its boundary with the Pump of Reality. The Pump of Reality has a *suctioning* behavior - from the center to the periphery - while gravity has a *pulling* behavior, from the periphery to the center.



If this rupture of equilibrium is as rapid (instantaneous) as it is powerful (explosive), it's because it is implicitly organized on a pattern that is at least equal to $4/3 \pi R^3$. This is the volume of the star calculated from R , its radius, but to the power of 3. In other words, it's based on a pulling volume (the Pump of Reality) that is at least equal to the sphere of the planet/star surrounding it in three dimensions.

A factor of $4/3 \pi R^3$, combined with the volume of a star that dynamically explodes outward, is absolutely phenomenal. This amounts to describing an evolution of an exponential nature in space and time. This is why the generation of a black hole practically occurs in the duration of an explosion — **boom**.

If this explosion occurs, it's because, mirroring $G = (10^{1/\log T})^n$, we also find $T = (10^{1/\log G})^n$: the variables are interchangeable, but the reality of things is different. Here's what actually happens: under the influence of a very large n ,

1. The gravity of the star explodes upward,
2. Its temperature also rises, but in a relatively much more significant proportion,
3. Until it weakens the electrostatic bonds of its matter, making them impossible to maintain,
4. So that the star's gravity becomes an unstable production,
5. Which suddenly collapses — **boom** - under the effect of the Pump of Reality, whose pulling volume has all this time increased by an exponential factor equivalent to $x 4/3 \pi R^3$.

To use this analogy, and it is just an analogy... things happen somewhat like they do on Earth when, with an inflatable balloon filled to the brim with helium, you release it into the air on a beautiful summer day. At a certain point, the balloon reaches a high-altitude zone where the surrounding air pressure quickly becomes lower. Meanwhile, the balloon expands due to its relatively higher internal pressure (it still contains the same amount of light helium). Eventually, it goes boom and bursts.



This is also a relative phenomenon, where pressure evolves negatively and is concentrated at the **boundary** between the inflated balloon and its surrounding space³³.

³³ In this case, the balloon that explodes is governed by the Ideal Gas Law (1834) and its formula $PV = nRT$, where P is the internal pressure of the balloon, V is its volume, T is its internal temperature (we encounter temperature again, because temperature expands the volume of gases), n is the amount of gas/air in the balloon, and R is the ideal gas constant (... as long as it remains so, see appendix: the Measurement problem). This is a classic in physics, taught very early on.

The only difference here is that the phenomenon is primarily related to increasing altitude. Whereas for black holes, it's related to the factor **n**, which has 'gained altitude' in its own way before experiencing the consequences under the suction effect of the Pump of Reality.

Once the star has exploded, what remains?

In our opinion, it's not a hyper-dense bottomless pit, and certainly not hyper-cold. The matter has just been disintegrated and has lost its electrostatic coherence. At the periphery, there is a boiling soup, as illustrated, called the 'accretion disk.' At the center, there is a dark space whose temperature is not zero and cold, as illustrated, but simply less hot.



Direct radio image of a supermassive black hole at the core of Messier 87

In reality, the conclusion is that during the 'Black Hole' operation, the star's core did not collapse. It was almost instantly hollowed out of all its matter under the effect of the negative pressure of the Pump of Reality. It's as if this pump had ripped out the star's core in an instant. A proper core removal.

This gives the impression of a black hole, yes, but in fact, it's a hollowed-out space filled with smoldering ruins. A space outlined and contained by a rotating, boiling soup. The illustration above says nothing different.

What should we think of the whole? It strongly resembles a donut.

A donut freshly taken out of an astronomical oven. And a liquefied donut. Therefore, since there is little matter at the center, gravity there should tend toward zero rather than infinity. More precisely, this gravity is then the geometric byproduct of the rotating, molten matter located at the periphery of the donut. A scalar product in three dimensions, relative to the center of the donut-shaped volume. That is, a volume equal to $V = 2\pi^2 Rr$, where **R** and **r** are the outer and inner radii of the donut.

A bit ironically, but that's not our intention, one could already conclude that a Black Hole is actually like the famous ITER nuclear fusion reactor that works well (ITER is discussed in detail later). And for good reason: its peripheral plasma operates in the near-absolute cold of interstellar space (2.73 kelvins), subjected to an external/internal gravity that is practically residual. Additionally, this plasma is not confined within a chamber, unlike ITER.

It's fusion in its purest form. A pure fusion that ITER can't afford.

And it's a donut that might eventually dissipate over time. But that's just one possibility (see further discussion later). We're talking about hundreds of thousands or millions of years, depending on the size of the original star. In the meantime, this donut emits very weak gravitational waves corresponding to the disintegration of the molten matter that it is made of.

A question that might arise is why, on a global scale, this donut would still have an attractive force toward its center? And why 'nothing that enters can escape.' Assuming the mathematical observations were accurate (see above), these phenomena can be explained in two points.

1. The geometry of the donut organizes it as a torus. Therefore, the drain of a kitchen sink or bathtub is the most fitting concept to describe it. It follows naturally that anything that comes close to this sink drain tends to slide towards its center before disappearing into it. This is primarily a result of its toroidal geometry.



2. No one has ever seen the other side of the Donut.

Beyond the apparent dark and smoldering ruins at its center, it is certain that light and its photons are absorbed there. They mix in just as they would with any black body. Since this one isn't very substantial, the whole affair ends up as intergalactic sauce.

See the appendix: in 1900, Mr. Max Planck very clearly explained what happens in such cases. We have no reason to fear any extraordinary radioactive or nuclear phenomena whatsoever. Refer to the appendix for more details on this fascinating point.

For more massive bodies, such as asteroids or even planets, the question is to what extent they can be trapped in the center of the Donut; mix into it; or, after spending some time in the hot-cold environment (periphery-center) of the Donut, escape through the other side of its hole?

Inside the Donut, these more massive objects are subjected to a variable and unstable situation, hot/cold, from a thermodynamic perspective. This instability over time could give them the opportunity to quietly slip away through the back door. And it's a phenomenon that could occur instantly since it results from instability: thus, it's almost impossible to observe from Earth. We would need to be observing at precisely the moment when such an expulsion occurs.

It is highly likely that both scenarios (trapping-mixing and trapping-expulsion) happen almost indiscriminately, depending on the conformation of the celestial bodies that might have been drawn in.

We insist: we should not speak of a Black Hole, but rather of a Donut or a Black Donut.

On that note, the final question at this stage is whether the molten soup that forms the periphery of the Donut could, over time, reconstitute new celestial bodies, such as planets, from its damaged base over thousands or millions of years. In principle, it happens. If there is an absence of significant surrounding gravitational attraction.

Indeed, the matter of the periphery/accretion disk is destined to cool down in interstellar space, simply due to the thermodynamic exhaustion of heat in this ultra-cold environment (2.73 Kelvins). At the hollowed center of the Donut, gravity is weak due to the incoherent and minimal amount of matter. As the periphery/accretion disk cools, its matter contracts, precipitating toward the center of the Donut, whose diameter is simultaneously shrinking. In this center, the formation of a celestial body, such as a planet or an asteroid, could restart through the condensation of matter. This is possible because, on the other hand, the Pump of Reality will have, for a long time, little substantial matter to pull in either.

After some time - thousands or millions of years, depending on the size of the original star—the whole structure should eventually produce a wandering planet (or a wandering asteroid). A celestial body with residual gravity, waiting to find a large sun, which would offer it warmth and, through the induced temperature, a bit of its former gravity's luster.

That, in our view, is the moral of the Black Donut. If one day you see a forlorn wandering planet passing by in the sky, consider that you are perhaps looking at what was once one of the kings of the cosmos, a dizzying sun. As Shakespeare said in *Richard II*, Act 2, Scene 2, "*Let's sit upon the ground and tell sad stories of the death of kings,*" for there is nothing more to contemplate.



15. Flashback to Quantum Physics

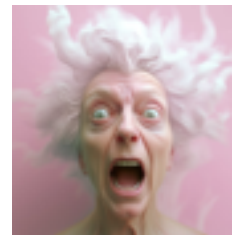
When the extraordinary event of the Black Donut occurs in the Reality, when the balance $G = (10^{1/\log T})^n$ is disrupted by the Pump of Reality, it must be understood that:

- This event manifests for a fleeting moment, the infinitesimal duration during which everything explodes, **boom**.
- It is no longer time to talk about classical physics or quantum physics.
- Nor even really about physics: it is time to acknowledge that a world has disappeared.
- For this reason, under this fourth report (see above for the three previous ones), classical physics and quantum physics should remain³⁴ irreconcilable forever: at our level of reality, their effective point of intersection is equal to the marginal duration of an astronomical explosion.

Which doesn't even give time to say: hello!

The matter is no longer quantum; it is Kantian. Named after the 18th-century German philosopher³⁵ who, in his *"Critique of Pure Reason"*, attempted to answer the question: What can I know?

Nothing, in this case.



16. The Quest for Loop Quantum Gravity

This important theoretical research aims to unify classical physics and quantum physics, using gravity as the common point, the smallest shared denominator. It is unlikely that this research will succeed. It would imply that gravity is a quantum phenomenon, that is, discontinuous -- — — — . $G = (10^{1/\log T})^n$ shows the opposite: gravity, due to the temperature associated with the electrostatic forces involved with matter, is a ——— phenomenon, continuous and of macroscopic origin and scale.

Furthermore, Dyson's conjecture (1962), mentioned earlier, has already established, with compelling arguments, that in the physics of the infinitely small, gravity would remain undetectable, even if one could one day calculate it directly. This is very unlikely. See Appendix for more details.

In fact, it can be said that the versatile and well-known characteristics of this physics (entanglement; superposition; non-locality; decoherence; quantum holism, etc.) have only one foundation: the possibility of temporarily and punctually ignoring gravity and its effects at this scale. Consequently, at the immediately higher logical level of matter organization, ours, that of electrostatic charges and beyond, quantum effects dissipate to a greater or lesser extent.

If this possibility of ignoring gravity has been identified, it is due to the discontinuity of energy (quanta, which define quantum physics) at this level of reality -- — — — .

³⁴ « Should remain » is used in this sentence rather than 'remain.' We believe this will be the case, but we do not wish to close this discussion a priori. The constraints of the real are one thing; human ingenuity is another.

³⁵ https://en.wikipedia.org/wiki/Immanuel_Kant

Discontinuity, which is no longer the standard regime of energy at the immediately higher logical level of matter organization, as stated by $G = (10^{1/\log T})^n$, which is of the ——— order. Thus, there is a divide between two bordering worlds.

So, if we persist in searching for ——— in ———, we are setting ourselves up for a few more centuries of discussions about what closely looks like a new Quest for the Holy Grail.

That wonderful thing which no one has ever managed to find, nor even say where it might be, or explain what it might look like. Because it has never existed except as a fantasy. Except that, as far as we know, one only needs to read the accounts in fine old books..., that adventure (and others of a similar mythological kind: Ulysses; Achilles; Gilgamesh, etc.) was quite inexpensive. It happened within reasonably short timescales, on the order of a decade, spent on horseback battling with swords from adventure to adventure.

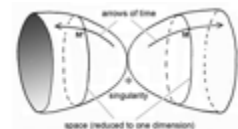
Quantum gravity is already overdue.
Having cost astronomical sums so far.



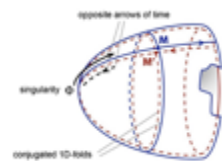
See Appendix for more details.

17. Twin universes, bi-metric cosmological models, etc.

The hypothesis that there exists a reality symmetric to our own is an old idea³⁶. Until now, no proposal made in this context has solved the mystery of gravity. This mystery has tended to be necessarily multiplied by... 2.



The relative exception (-1) is the Janus cosmological model by Professor Jean-Pierre Petit, CNRS, Pertuis, France. This model is a variation on the concept of twin universes. It simply organizes this idea into a Russian doll configuration, one inside the other. >>



Janus is effective due to its coherence with key observed facts, about twenty to date. It also dissolves the issue of dark energy/matter, which are non-existent. In summary, this cosmological model achieves what no other model has managed to do so far.

Nevertheless, this proposal³⁷ is based on the principle that the gravity of our universe is an effect of the pressure from a twin universe, as it is adjacent to ours and has negative conformity. This is not consistent with $G = (10^{1/\log T})^n$, which shows that gravity is a local phenomenon, specific to matter — our matter — under the influence of the temperature induced by stellar radiation.

³⁶ https://en.wikipedia.org/wiki/Negative_mass there a lot of papers on Wikipedia about this subject. This is only a sample.

³⁷ The presentation videos of the Janus model can be found here: https://www.youtube.com/watch?v=MwKT9Xqbc18&list=PLf5d8oy5zeoH7UvBI_9s377D0zUjls8f6. Mr. Hicham Zejli provides a thorough and pedagogical presentation of the model in this technical book: <https://www.amazon.fr/Mod%C3%A8le-Cosmologique-Janus-2%C3%A8me-%C3%A9dition/dp/2959189302>. It requires mathematical knowledge at the undergraduate level, no more. In the 60'-80's Pr. Jean-Pierre Petit was also

$G = (10^{1/\log T})^n$ animates our universe, and it does not need a twin to be animated.

Furthermore, it must be considered that the Janus cosmological model actually deals with the reverse side of things. It is organized around everything that can be negative from the known origin of Reality: antimatter; reversed arrow of time; reversed electric charges; negative mass; antigravity, etc. Pending further information, this leads us to conclude that:

- While it appears to refer to a twin reality, distinct and separate from our own reality, this model actually accounts for the reverse side of our reality.
- More specifically, it accounts for what we refer to in points **11-12**: The Pump of Reality.
- In this regard, Janus is a relevant, effective, and promising proposal. It simply confuses the 'Reverse Side of Things' with 'Alternative Reality.' See note: videos and the presentation book of Janus are indicated. Most are accessible to the general public³⁸.

To conclude on this point, could a 'twin universe' to ours truly exist? Or several?

Probably not, given the above. In any case, this twin reality would not be necessary for our own to exist and function very well on its own.

So, at this time, it seems more useful to say: our simply observable reality is estimated to an unimaginably vast extent of 93 billion light-years; we have not gone beyond the Moon; we barely know the oceans of our planet, and we know even less about its deep history, including human history: what's the point of a second reality?

With $G = (10^{1/\log T})^n$, we now have everything needed to understand and explore our own reality in depth; another reality would not provide us with additional understanding.

18. Theory of Relativity.

See appendix for more details.

Einstein's theory has successfully addressed the question of the exact origin and nature of gravity. It does not define gravity through a discernible physical phenomenon, as mentioned above. Although it has led to an avalanche of progress and a much finer understanding of Reality, that was the most important outcome in the end.

Nevertheless, the Theory of Relativity is a mathematical vision of Reality, both positively and negatively. Its foundation, Space-Time, represents an extraordinarily innovative metric. But it is fundamentally a metric that simply allows us to better encompass Reality and our understanding of it.



³⁸ Pr. J-P-Petit (87 years old in 2024) was also in the 60-80's one of the decisive inventors of Magnetohydrodynamics (MHD), a discipline without which President Putin's hypersonic missiles could not have existed. It was in Russia that his discoveries were given attention. This was readily acknowledged. In France, all authorities disregarded J-P-Petit for half a century. His Janus model was no exception to this true « Conspiracy of the fools ». See Internet for the whole story. It's an unimaginable affair. Mainstream media don't even dare to talk about.

The misuse in this regard is to completely dissociate the described reality from its metric. Similarly, as mentioned earlier, one could show a meter and claim, "This is the size of human beings"; no, it is primarily a tool used to measure and compare them, which is significantly different.

Therefore, the Theory of Relativity can still progress by addressing the origin of Gravity, $G = (10^{1/\log T})^n$, and the nature of Space (see previous points, the Pump of the Real). It should also work towards resolving the exact nature of Time, another puzzle that remains unsolved.

The principle of Relativity is embedded in the language with the expression *"each sees noon at their own door,"* which dates back to ancient sundials where the time was read. It is not unusual for this principle to evolve; it would be the opposite that would be surprising.

See appendices, where all these fascinating points are detailed.

19. Reformulation of formulas

With $G = (10^{1/\log T})^n$, we can reformulate our current formulas for mass ($M = p \times v$, where mass is weight times volume) and energy ($E = mc^2$; energy is mass multiplied by the square of the speed of light), Force, etc. Since in these three cases and others, mass is calculated according to gravity, G , so $G = (10^{1/\log T})^n$.

A simple change of variable is therefore required. The result appears more sophisticated at first glance, but it is more precise, as it is independent of the postulated G : constant.

Is it useful to display these formulas here? No.

It does not add anything pertinent for a general audience. Others will make this change of variable in less than three minutes. However, with respect to $E = mc^2$, for example, it will leave them in a amazed, marveling and contemplating much longer the true nature of the speed of light or the essence of mass.

Enjoy 😊

20. The Big-bang

The 'Theory' of the Big Bang refers to the origin of reality. It works well. However, it raises more than fifty important questions that remain unresolved. It is impossible to address them all here. We will focus on the essentials.

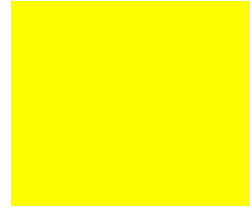


This theory states that our reality began approximately 14 billion years ago from a Singularity. A point-time **0**, which was the dimensional equivalent of the tip of a needle. A singularity whose temperature was the Planck temperature, about 1.416×10^{32} kelvins. This is roughly 10^{31} times the current average temperature of Earth. That is, 10 followed by 31 zeros³⁹...

$G = (10^{1/\log T})^n$ is inclusive, oh yeath. So the Big Bang is contained in $G = (10^{1/\log T})^n$. Its variables are interchangeable, so the formula can indeed be written as $T = (10^{1/\log G})^n$. Thus, while T was about 1.416×10^{32} kelvins, G was approaching an incommensurable small and negative magnitude, but not infinite.

³⁹ 10, followed by 31 zeros: with just three zeros and 1 hour, a standard cremation reduces you to a small pile of ashes.

At that time, the cosmos had no detectable gravity. It emerged later as a thermodynamic byproduct of matter in a state of hyper-sublimation. Just before, it was the era of indefinite radiation. To illustrate, the cosmos of that moment was not a great sun, which could not then exist. The cosmos was far beyond a sun: it was an indefinite radiation without any particular horizon.



It follows that a Big Bang did indeed occur. However, this does not fully clarify this singularity, the point-time 0 of the world. Indeed, it must be kept in mind that:

1. Time emerged with Temperature/heat, as it is also the place of deployment, at 10^{-43} second.
2. Space emerged with Temperature/heat, as it is the place of deployment, at 10^{-35} second.
3. All this happened just before the emergence of Gravity, of which time and space are the geometrical dimensions of deployment.

Therefore, to begin to elucidate this point-time 0, one must at least be able to physically relate the categories of Temperature and Time. This requires first resolving another mystery: the nature of Time. As of now, we do not have an efficient definition of it anywhere.

So, regarding the point in time 0 of the universe, without considering our everyday applications of time which work very well otherwise, manipulating this Time variable without fully understanding it is not very useful or meaningful.

There is, first and foremost, a puzzle to solve: the puzzle of Time.

Once solved, one can expect applications even more astonishing than those presented in the following pages. Since these are all connected to the mastery of Time. This question is discussed in detail in the appendix, see "The Problem of Measurement."

One can also expect even more astonishing applications than those presented in the following pages, as they are all related to the mastery of Time. This question is discussed in detail in the appendix, see « The Problem of Measurement ».

Applicatifs

21. Thermogravity

It would be wise to invent Thermogravity, a new field that would not be designed as a full-fledged science (for reasons explained in the annexes).

The aim of this discipline would be to master gravity on scientific, technical, and industrial levels. This would quickly lead to immense progress, as illustrated by the examples provided earlier and below.

Specifically, this would involve Thermo-Electro-Gravity (TEG). Since three parameters are involved: Temperature, Electrostatic forces of matter, and Gravity, one could also refer to it as Thermo-Stato-Electro-Gravity (TSEG). However, this would unnecessarily complicate the concept. And could easily be misconstrued due to its phonetic similarity to (at least in French...) drug trafficking. Let's remain serious; the subject is already quite hallucinogen.



22. Fields of applications

$G = (10^{1/\log T})^n$ can find applications and immediately improve technologies and processes in at least these 24 economic major key sectors & businesses. Sectors & businesses that use or rely on gravity to function, sometimes even without fully realizing it (20 and following):

1) Maritime Navigation, **2)** Geophysics and Mineral Exploration, **3)** MRI & Medicine, **4)** Hydraulics and Water Treatment, **5)** Construction and Architecture, **6)** Hydroelectric energy, **7)** Lifting Systems, **8)** Astronomy and Astrophysics, **10)** Air Conditioning Systems, **11)** Seismic Detection and Forecasting, **12)** Aerospace & Avionics engineering, **13)** Measurement Equipment and new types of radars, **14)** Agriculture (silos; irrigation), **15)** Transportation, **16)** Security, **18)** Environmental Sciences, **19)** Armaments; explosives, **20)** Computing/Quantum Computers, **21)** Energy, nuclear fusion, **22)** Artificial Intelligence (see further for the link...), **23)** Financial Markets (similarly), **24)** Automotive; Thermal engines ; Hydrogen & Co.

23. Quantum computers

The marketing of the IT sector has made us forget: our current computers are essentially a complex arrangement of **On/Off** switches, **0/1**. This massive array of switches is manipulated at high frequency by software programs that enable us to achieve what we ask of computers. Basically, it's nothing more than that.



A switch device of this kind is discontinuous - - — -. Precisely because of the binary **On/Off** alternative that drives it. For the same reason, our computers are structurally insensitive to Gravity. Because the choice of **0/1** does not depend on it, and between **0** and **1**, there is nothing: neither values, nor space, nor time; nothing; the alternative of everything (**1**) or nothingness (**0**).

Quantum computers replace switches with Qubits. This new type of switch has the essential characteristic of being continuous — (somewhat like the variable switches in our lamps, and this is an analogy). This implies that, at the same moment, each switch can take many more values — than just the binary **0** or **1** of the old switches in our current computers.



However, it has a drawback⁴⁰, this change has a tremendous advantage: for the same calculation, one can use far fewer switches (Qubits) that operate much faster. Since each of them can simultaneously handle a much wider range of values than the binary **0/1** of the old switches in our current computers.

This means that, in principle..., a quantum computer can handle infinitely larger calculations in a much shorter time. And sometimes, thus, make the computed solution of a problem accessible. A solution that would otherwise remain beyond the computational capabilities of current computers.

(Quantum computing can be understood well without resorting to the jargon of alchemists).

Nevertheless, this great interest comes with a major drawback: a quantum computer is, as mentioned above, a device of a continuous nature —, due to the non-binary (**0/1**) value spectrum that its switches can simultaneously handle.

Such a computer is therefore structurally sensitive to gravity: it experiences the space-time where gravity can manifest its effects. Just like everything continuous on this planet that is immersed in its gravitational field —, including you and us. This explains, essentially, the current disturbances and errors affecting these machines' calculations. This ultimately still prevents their industrialization. Moreover, it makes them prohibitively expensive, as will be discussed below.

At present, to address this problem, quantum computing professionals talk about "noise" or "interferences." Yes, this may seem trivial on the surface. And at this limited scale (size of the machines), it is not easily detectable. However, at a deeper level, the entire gravity of planet Earth subtly interferes with the quantum computers' calculations, disrupting them. This is why these machines remain highly experimental devices. Contrary to what advertising often implies : significant changes are now needed for them to work effectively.

Based on current technology, the development of quantum computers will be long and challenging. It will most likely be based on photonic technologies. The photon is the least sensitive to gravity particle known (before the neutrino, which we do not yet control). Particularly at a local and precise scale (cf. size of the machines). This is due to the photon's zero mass, or at least its mass being undetectable with current knowledge/science/technology.

Ideally, the functional core of a quantum computer should be entirely photonic, and based on components as miniaturized as possible. As soon as more gravity-sensitive components, and of significant size, are introduced into its core, it creates space (and time) where gravity can act proportionally, thus disturbing the device. Inevitably, the benefits of the quantum approach fade, become muddled, or disappear. These computers must therefore be small, as tiny as possible. (More details on this topic are provided later and in the appendices).

⁴⁰ A classical computer must handle a computational load of up to 2^n : 2 represents the binary alternative 0 or 1, and n is the number of switches used simultaneously. A quantum computer, on the other hand, must handle a computational load of up to N^n . Here, N is the number of values/states per switch, and n is the number of switches. The difference in magnitude from 2^n to N^n becomes phenomenal quickly when N, n gets large. It is exponential. The challenge is whether it is physically possible to control an exponential.

Operating these computers in weightlessness, in a space station, might be a wise idea. To exploit them as soon as possible, to the best of their abilities—assuming the costs and feasibility of this aerospace operation, of course.

Otherwise, a way to achieve anti-gravitational confinement of these machines on Earth will need to be found. A solution that is both cost-effective and technically simple (as opposed to current large refrigeration systems). Ultimately, this comes down to discussing the relaxation or stabilization of the electrostatic charges of the computer's material. A short-range, scalar-stationary, continuous wave method might work (discussed in more detail later). Only if its effect can be contained on the surface of the computer without affecting the computer itself.

But then, the machines would have to be bolted to the ground. Otherwise, they would float in weightlessness before our astonished eyes. Since they would have been rendered insensitive to gravity. Quantum computing will owe its professionalization to good old bolts, that's how it is. This world is a joke.

A clarification if needed: we have no particular stake for or against quantum computers; we have no interest in this field in any respect; we would find it useful if these computers could exist.

24. Beyond Quantum: Investing in Metalogiqueⁿ, Choosing Humanity

Beyond the scope of quantum computers, considering the uncertainties regarding their development, it seems that the IT sector could advance infinitely more simply and rapidly by investing massively in the progress of Logic. Specifically, in Metalogicⁿ. Logics of logics of logics..., to the power of *n*. This implies a human progress rather than a technological and material one.

This position is motivated by three reasons:

1. Logic/Metalogic is not exactly like a finite natural resource: On the contrary, it is a human formalization that has been continually progressing since the origins of Homo sapiens. Progress in this area is recent, as far as we know. Our mathematics, for example, is only about 5000 years old. Its major advancements are only 2 centuries old — barely nothing. There is no reason to believe that this progress could come to an end or that we have understood everything in this field. Particularly, in resolutely pursuing the path of Metalogiqueⁿ.
2. The current revolution in Artificial Intelligence primarily relies on the formalization (2017) of a metalogical mechanism, *transformers*⁴¹. This means that machines now understand, for example, that King × Female = Queen. Previously, they could not. But mechanisms of this kind are not just one, but thousands, and exist at increasingly broader and higher levels of logical integration. See illustration below.
3. It should be understood that the more a system is driven by Metalogicⁿ, the more it is inherently powerful and fast. This is simply because it is also extremely efficient in computations by design.

Compared to existing, Metalogiqueⁿ is a new discipline. Its discriminative rules being specific, fine, and sophisticated, it will be the subject of a subsequent Chammallow note. In the meantime, to get an idea of its effectiveness, consider a sample, which is just a simple example among 'a million':

⁴¹ Artificial Intelligence, Transformers: [https://en.wikipedia.org/wiki/Transformer_\(machine_learning\)](https://en.wikipedia.org/wiki/Transformer_(machine_learning))



Möbius Strip



Hamster in the Cage



Myth of Sisyphus



Ouroboros



Carousel of Little Horses

You had already understood. At a glance. Without really thinking about it. Or even saying a word. You had already grasped what it was about. What the essential connection was. What the Metalogic was. Yet, these are very different objects. Coming from the four corners of the world, from the most diverse fields, and spanning over 25 centuries. But you understood in the blink of an eye, even before it was explicit in your mind. In less than 1/20th of a second, in fact. Even though it concerns an abstract and complex concept, infinity. Infinity looping back on itself. Everything that goes in circles.

What's more, you would have understood just as quickly even without the captions on these pictures.

But do you have any idea of the extraordinary number of logical loops your mind must have performed in that instant to understand what these 5 images could possibly be about? 2 or 3 at most. No more ☺.



Möbius Strip



Hamster in the Cage



Myth of Sisyphus



Ouroboros



Carousel of Little Horses

This is why you grasped a very complex concept in the blink of an eye. Without even needing a spoken word, or a previously objectified thought to do so. Everything happened in that instant. And the same thing would have occurred when you were 6 or 7 years old. (Try it on a child...)

In the opposite direction, for an artificial intelligence to achieve the same result, it must first be trained extensively and on a vast array of samples. It's not that it is incompetent; rather, it is not inherently equipped with the category of metalogical links needed to establish this relationship without training and so quickly. In fact, faster, because a computer operates at a frequency far superior to ours.



This introduces the idea that immediate progress in computing should first, or simultaneously, involve massive investments in logicians. These are individuals specialized in logical matters. This would be more effective and faster, and much less costly.

Ironically, all these logicians with advanced degrees would do better to work with **young children** to quickly formalize as many metalogical mechanisms as possible. The simple reason is that these mechanisms are available and articulated in their native state in children. In contrast, in adults - though not universally true, but frequently - the metalogical mechanisms are muddled by acquired knowledge that obscures their active presence.

An adult's brain is merely the colorful brain of a child. In both positive and negative ways.

This immediate progress⁴² in computing primarily concerns the field of **Artificial Intelligence**. Metalogiqueⁿ is the lever of its future, and at a much lower cost. Because it is also: an Ecology of the Mind. In this matter, the end question is the dynamic articulation of these mechanisms (vs their juxtaposition), accompanied by the continuous change and reformulation of the system's base. Where the infinite - yes, the infinite - plays the role of a switch and progression ratchet for the system. Thus, over time, but rapidly, a metalogical structure becomes as compact and dense as it is effective and powerful.

There is no real coincidence that a child can understand more and more things more quickly. It is an effect of the increasing complexity of their metalogic, which develops according to a non-linear pattern. And, to be honest, through a style of learning that comes from: play.

As for quantum computers, they will always be very useful in the specific domain of intensive calculation, where the primary necessity is, of course, computing power: brute force. When you think about the relationship between Calculation & Metalogicⁿ, it quickly becomes clear that the more the former dominates, the more the latter becomes secondary, and vice versa.

The above illustration does not say otherwise.

When, as a younger person, you learned your multiplication tables by rote, it was no different in essence. But in a different way. You didn't understand it; explaining it analytically would have been long and complex. So, it was decided to drill your brain with repetitions and time spent reciting **mantras**, and to have you learn these tables at all costs, within the relative infinity of repeating hours. In other words, you were subjected to massive brute-force calculation, with **0 logic**.



We will discuss these points in detail later. It would be a mistake to underestimate the underlying connection between Artificial Intelligence & $G = (10^{1/\log T})^n$, gravity. In practice, and when we take the time to reflect, we quickly understand that everything that allows us to determine if something is likely, true or false, coherent or not (which encompasses almost all current issues and limits of A.I.) has a more or less direct relationship to gravity or the idea of gravity. Since gravity creates the consistency and coherence of Reality, is it so surprising...?

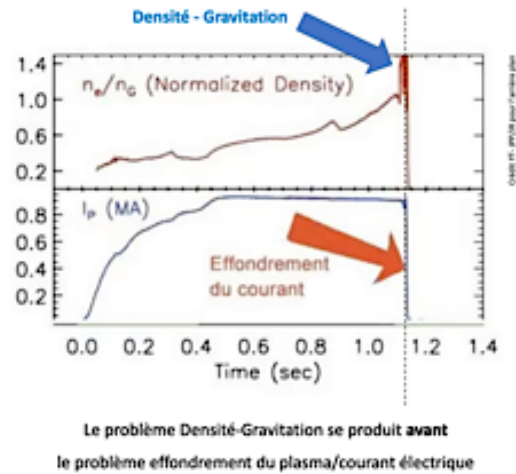
⁴² To the question: Can Artificial Intelligence become Conscious? The definitive answer is: **No**. Metalogic presents an upper limit for machines that they will never be able to surpass. However, they will quickly be able to simulate the state of Consciousness. In everyday practice, this won't make a significant difference, provided that humans, on their part and from a psychological standpoint, learn to manage this difference. Otherwise, a nice series of catastrophes is highly predictable. These points will be detailed in the presentation of Metalogic, including its foundations, rules, formulas, etc.

25. Nuclear fusion

Nuclear fusion is one of the keys to humanity's energy future. <https://en.wikipedia.org/wiki/ITER>

As currently designed, ITER-type nuclear fusion reactors (Cadarache, France) will not be able to operate industrially. It is known that these machines suffer from instability of the energetic plasmas they use. Plasmas from which they aim to harness the energy of a tremendously powerful fusion.

However, it is this instability that prevents them from operating for more than a few seconds or minutes⁴³. Currently, there is no explanation or solution to this problem, the resolution of which would enable these nuclear reactors to reach an industrial operational stage.



In reality, through the Temperature, these reactors suffer from the effects of gravity on two levels. First, the Earth's gravity within which they operate. Secondly, and **more problematically**, the gravity induced by the increase in the temperature of their plasmas over time and according to $G = (10 \wedge 1/\log T)^n$: see visual; this locally generates a gravity that is undetectable at this scale and in this form: it involves plasmas, completely ethereal matter, and a fairly small volume.

However, there is indeed a discrete gravity that eventually collapses the plasma because it occurs just before the collapse of the plasma (see visual; density). This phenomenon occurs due to the energetic particles of the plasma and/or any dust present and/or created by the reactor. It is, in all cases, a cataclysmic seeding effect with catastrophic results that can be seen very quickly.

By its nature and operating temperatures (millions of degrees and more), a nuclear fusion reactor will sooner or later generate this seeding. This seeding is confined within the reactor, with no possibility of exclusion. Thus, the seeding develops until it collapses its plasma. This is also why operating these reactors in zero gravity (e.g., space station) would probably not solve the issue. Whatever is done, this difficulty is internal to the device. It is not a star, see above **Black Donut**.

The problem to be solved is related to **Thermogravity**. In the hot spectrum, we have seen difficulties that are, in our opinion, insurmountable given the current state of technology. Therefore, it remains to consider the cold spectrum, which is less problematic for symmetrical reasons.

It would therefore be wise to explore a cold nuclear fusion device. Practically, this should consist of a reactor **1**) operating at a temperature close to absolute zero (or very cold); **2**) magnetically confining its compounds and energy production (to avoid damaging the device itself, which is cold); **3**) and operating like a centrifuge *at an extreme speed*, under vacuum (to avoid friction-heating), with its rotation axis being more favorably perpendicular to the Earth's gravity axis. This would help escape the damaging phenomenon of imbalance⁴⁴.

⁴³ The world record is currently held in China and can be found here: https://en.wikipedia.org/wiki/Experimental_Advanced_Superconducting_Tokamak.

⁴⁴ If the axis of a rotating device is horizontal relative to Earth's gravity, it experiences a gravitational stress along its length that causes it to work and become unbalanced, in proportion to the rotational speed and the passage of time. Vertically, this stress is reduced.

If high-temperature atomic fusion does not work, we might better achieve it through the mechanical fusion of atoms at a very low temperature, where compression-fusion is achieved through extreme centrifugation and magnetic confinement-crushing. For this, we could use light and simple atoms. Hydrogen and boron, for example, as their fusion does not produce neutrons (which are destructive to the reactor). But to fully benefit from the centrifugation effect, finding a combination (3,4... ?) of heavier and more affine atoms (see nuclear structures) would probably be better: the fusion state we aim to achieve would be more easily reached by the facilitated crushing of atoms under the effect of their own weight/masses/affinities.

Nuclear fusion produces surplus energy compared to the used compounds, so it is probably not necessary for such a device to be gigantic.

On the contrary, it would be more favorable to start with smaller or even very small devices. This would also make them much less costly (ITER, Cadarache, France \approx 25 billion euros at this date...) ⁴⁵ and, in practice, much more manageable. Military-quality uranium production centrifuges are not otherwise.



Finally, one could consider the possibility of a hot fusion reactor operating in a cyclic/alternating/modulated manner. So that the production of electrical current remains below the temperature threshold of the plasma where gravity manifests (too much) and collapses the plasma, thus affecting the electrical current production.

This would be a “modulated nuclear fusion reactor.” ⁴⁶

It is impossible to say, without technical data and tests, whether the process can function in a stabilized, synchronous, manageable manner, etc., and at a low cost. Or if it is another type of complex system trying unsuccessfully to operate at a slow pace.

A note if needed: we have no stake for or against ITER; we have no interest in this field, in any way; we would find it useful for ITER to work. If only for the recognition of the work of its thousands of employees.

26. Gravity, Antigravity

In the realm of mastering gravity through its characteristics or the instrumentalization of electrostatic forces of matter, that we called Thermogravity, there are:

- Solutions to current difficulties with quantum computers or nuclear fusion reactors, as well as at least thirty other application areas, see above and below.
- New means of transportation based on the activation of antigravity (a striking concept), see below.
- A new generation of weapons causing, locally and through directed and activated antigravity, the electrostatic collapse of matter. In other words, its simple disintegration. Without the need to explode, burn, or annihilate it with loud tumultuous crashes. It involves instantaneously turning it into dust using directed energy sufficient to accomplish this; the winds would then disperse what remains.

What can resist this? Nothing. It is pointless to hide it; everyone will eventually understand.

⁴⁵ <https://en.wikipedia.org/wiki/ITER> The ITER reactor has experienced only delays and setbacks since its creation. As it stands, it is not operational, and its leaders do not have the means to provide a probable date for its operation or commissioning.

⁴⁶ Modulated, it gives the reactor a gentle and tender appearance; even radical environmentalists might appreciate the proposal.

Note that for authorized civilian demolitions, this could be very useful: everything collapses until it reaches the ground, and then it's just a matter of sweeping up the dust. All those involved in controlled demolitions would immediately see the benefits of this approach. Blowing up a building is time-consuming, expensive, risky, and requires extensive preparation and precautions, with many highly skilled workers. Here, nearly nothing is needed (a continuous stationary scalar wave emitter). Except, of course, for informing people. And it would seem like magic, akin to an Indian summer in September.



Although this may seem surprising, as long as $G = (10^{1/\log T})^n$, when connected to the respiration of electrostatic forces of matter, it implies that G can be manipulated such that this respiration amplifies beyond a wave limit, causing the mechanism to malfunction and disintegrate. Thus, matter simply turns into dust.

Conversely, under different operational limits, $G = (10^{1/\log T})^n$ allows **1)** either to locally relax the electrostatic forces of matter of an aircraft, for example, similar to... the Astro lava lamp; **2)** or to locally freeze its electrostatic forces, making the aircraft immediately insensitive to local gravity.

This essentially refers to antigravity transportation means and aircraft requiring relatively little energy compared to ours. Indeed, in our current aircraft, most of the energy is consumed in combating Earth's antigravity, friction, turbulence, and noise⁴⁷.

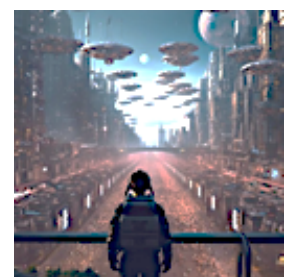
It also refers, relative to Earth's gravity, to a more or less opaque antigravity bubble generated around the device, with distinct effects. In the first case (**relaxation**), one could move through the air gently, slowly, and silently. In the second case (**freezing**), one could maneuver as dramatically as achieving spatial feats unknown to date.

Indeed, the intensity of dependence on Earth's gravity determines the inertia of speed and the maneuverability of a moving mass. When this dependence is zero, there are no limitations other than the power of the device's engines.

Otherwise, outside of this case, one can drift endlessly through the air like a butterfly 🦋.

Technically, these topics are related to the issue of continuous stationary scalar waves. Chammallow patents in this field concern only peaceful and civilian applications. Military strategy is another world. An area, in our opinion, better handled by professionals in that field. Hence, we have claimed nothing directly in this area. That said, let's smile a bit: an antigravity tank could be surprising.

And yes, what is very soon possible is the world of visuals allowed by $G = (10^{1/\log T})^n$. We long hesitated to illustrate this point (**26**) with an explicit image. Fully aware that we would directly activate imagery currently considered science fiction. But it has also been, from a social, media, and cultural perspective, heavily sprinkled with endless controversies regarding unidentified objects crossing the world's skies or entering oceans as if water were air. Indeed, it is difficult to imagine the real possibility of what has long been disqualified: this is the principle of reality; there's nothing anyone can do about it.



In conclusion of disparate discussions, we thought that after all... this note would also be perceived as a kind of UFO by a significant number of people. So, UFO for UFO... and a vote concluded that it would be

⁴⁷ Flashback : a supersonic aircraft (2180 km/h) like the Concorde used **50%** of its fuel to make noise.

cowardly to deliberately avoid illustrating the fact, in order not to disturb a cultural taboo that has no real basis. No more founded than in Leonardo da Vinci's time, when people were long pulling their hair out, wondering how birds could fly, given that they are heavier than air...?

There are a thousand examples of this kind. And you see, the absurdity of the taboo is always better realized in the irony of a rearview mirror. At the moment, most authorities, experts, and too many conformist people also prefer to make nonsensical statements to affect the serious air that the tyranny of the times has imposed. Nothing ever really changes under the sun.

It is understood that, on the specific question of "UFOs," we have **0** opinion. Since, as currently posed, this question does not interest us at all, details in a note⁴⁸. But be equally aware that **1.** The 'Big Bang' or 'black holes' were initially terms introduced as jokes. **2.** an era that posits Absolute Seriousness as a social imperative is also a time when the capacity for dialogue tends quickly towards: zero.

This is an opinion.

27. Thermal engines (automobile, etc.); hydrogen

These devices are subject to gravity.

Their engines are driven by hot plasma-like instabilities, because within them (see pistons, combustion chambers, etc.), a violent explosion of an air-fuel mixture occurs.

Recently, the company SeepdOfAir⁴⁹ invented engine pistons with a head top that is not smooth, which is their classic, original machining. Instead, this top is marked with deeply embossed cells on this surface (see visual).



The goal is to create a mechanically unstable surface for the air-fuel mixture. Consequently, to enhance its volatility during the explosion. Logically, the published data on this invention reports a 10-15% fuel savings, which is significant. Additionally, it provides a more powerful torque for the thermal engine equipped in this way, as well as less maintenance and wear (since the mixture burns better and more completely).

The implicit variable of this invention is $G = (10^{1/\log T})^n$.

What happens: equipped this way, a thermal engine shifts its explosive continuity/discontinuity ratio upwards $-- -- --$ vs Gravity, which remains constant and continuous on Earth $-----$. The dynamic combination of the two in an engine equipped this way leads to the air/fuel mixture becoming spontaneously more explosive. Hence the observed results.

But in reality, this modification can go far beyond engine pistons. It can affect the entire internal surface of the engine's combustion/explosion chambers. With, as a result, a tremendous additional power for much less fuel consumption, and corresponding savings for vehicle owners. Or, for equivalent power, much smaller and lighter thermal engines.

(In short, everything that is desirable).

⁴⁸ There are some significant and disturbing facts about UFOs. However, overall, it seems to us that it's a realm of testimonies from which nothing can ever be done. Those who might have more to say—military personnel and their sophisticated detection means—are silent and have the means to remain so. What use is it to concern oneself with such a question? This is just an opinion.

⁴⁹ <https://www.speedofair.com/fr/about>

(a) Simply because the instability surface of the engine's combustion chambers will have been considerably increased⁵⁰ vs the uniform continuity of Gravity. And nothing that is, in reality, too complex to technically implement.

(b) Finally: the massive production of hydrogen with little to no electricity, therefore at a very economical cost, even marginal in the absence of electricity..., follows the same principle. Only adaptations-transformations are required regarding the specific question of liquid water conformation. This does not refer exactly to the hydrogen bonds of water molecules.

The beginning of the demonstration was provided here in 2020: <https://patentimages.storage.googleapis.com/87/a4/0b/e0209dfa8bcc0d/WO2020223489A1.pdf>, by the University of California. This hydrogen extraction technology is interesting and efficient. However, it is far from being fully developed. As often happens, it was a splendid serendipitous discovery (see the detailed story online) lacking the theoretical framework for understanding. This occurs very frequently in reality.

And without further details at this stage on these points (a), (b), and (c), see note (50). Three Chammallow patents on these points are indeed in the process of being published.

Being open individuals, people, companies, or institutions interested in all the practical applications or patents mentioned in this note can contact us at: <https://www.linkedin.com/in/charles-de-mercy-381781a6/>. It should be understood that, on this specific point, we can only discuss with properly identified professionals. And individuals who are qualified in the relevant fields or informed investors.

28. Financial Markets.

Regarding investors and their favorite adage, "*Trees don't grow to the sky*" (see **point 7**, Ecology, giant dragonfly, etc.), it is worth noting that the formula $G = (10^{1/\log T})^n$ can be transformed and adapted for application to financial markets, with potentially nice profits. The operation is subtle, but the results are immediate according to the tests conducted. The reason is that the Metalogiqueⁿ of Reality is what it is; it never truly changes anywhere.



No further details at this stage to avoid causing harmful financial disturbances.

See quantum computers; and appendix on: Metalogiqueⁿ

⁵⁰ **Point (c)**, the same principle can be adapted to cannons, firearms, and other weaponry, making them much more powerful at a marginal cost. Although this requires specific adaptations to the respective fields, it is essentially the same story. And it will always be the same story, wherever we align with Gravity according to $G = (10^{1/\log T})^n$.

New Frontiers

29. An Holographic Reality

$G = (10^{1/\log T})^n$ has a deeper meaning. A significance that has so far been left unspoken. However, it has only been developing in the shadow of the logic of consequences since le point (2). The way to account for it is as follows; from the moment when:

- G and T, gravity and temperature, are linked in a mirror-like interplay created by $G = (10^{1/\log T})^n$, cf. "Gravity is a factor of temperature,"
- And T, temperature, is, through heat, a wave-like byproduct of the primordial forces of the cosmos—the four fundamental forces of Reality (strong nuclear, weak nuclear; electricity; magnetism).
- Thus, T (thermal energy) has emerged as a derived force, a secondary force of the cosmos,
- And G emerged after T at the moment of the Big Bang. So G itself is derived from T, and for this reason, it appears as a tertiary force of the cosmos,

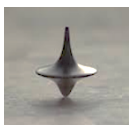
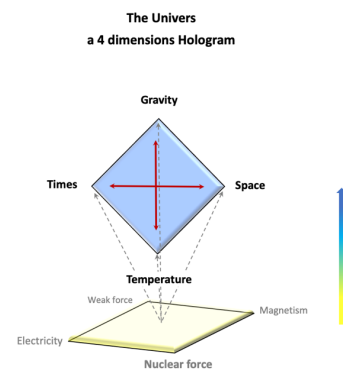


And that $G \times T$ together create the substance and consistency of our Reality according to $G = (10^{1/\log T})^n$; which practically refers to stars, planets, galaxies, and their evolution through their gravitational interactions in interstellar space,

We must conclude that what we refer to as the Universe, but more precisely the Real (cf. above), is in fact the combined product of forces, G-T, which are: **secondary & tertiary**.

This combined product must therefore be considered as a derived projection. A three-dimensional projection of the four fundamental forces of Reality. This amounts to describing the universe as a **holographic** phenomenon⁵¹. Because on one side, there are the foundations; on the other, their three-dimensional expression, and the two are not on the same logical level of manifestation.

$G = (10^{1/\log T})^n = \text{Realized Matrix}$, if one had to give it a one-word image. And a hologram shaped by four dimensions: Time > Space > Temperature > Gravity.



But this should remain an image. It should absolutely remain an image. Otherwise, one might be tempted to describe the Real as a pure (holographic) illusion. Yet we do not exist without and outside of this Reality. It is our primary and only support for existence as far as we know. Nothing, therefore, can be truly called illusory, properly speaking. Especially since this object named: Universe is made up of forces and dimensions that are — rather than - - - : we do not exist in ellipses...

⁵¹ This hypothesis has been raised by quantum physics for about twenty years without being demonstrated. See for example, <https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.118.041301> or, more accessibly, <https://insidetheperimeter.ca/fr/a-new-take-on-holography/> or Wikipedia, https://en.wikipedia.org/wiki/Holographic_principle

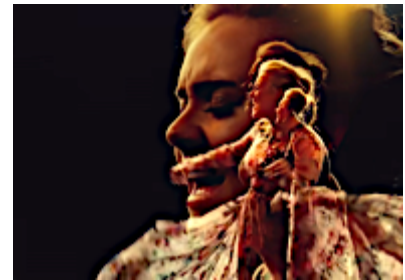
Ultimately, the contrary view would amount to adopting a completely external stance towards the world. Disembodied and conceptual. Until one understands that this stance is ultimately of a Divine nature. More or less without stating it. Because within the realm that our concepts allow, nothing else can quite claim this exteriority. “Only God could.” Whether one considers it transcendental, in a Western religious cultural tradition, or immanent to the world, in a more Eastern religious cultural tradition⁵².

The debate between those who believe in Heaven, or some firmament, and those who do not, has, in our view, already caused enough damage throughout History, so that we should not lose ourselves once again in drawing abusive general conclusions: they are very dangerous for this double reason.

30. The first steps of the world

$G = (10^{1/\log T})^n$ is the formula for the Creation of the World.

This time, the statement is not a metaphor, a joke, or a provocation: it states the fact. Here’s what can be understood from it: at the origin of the Big Bang, the world did not have existence in the strict sense. As mentioned earlier, it was the era of indefinite radiation. The time of the highest possible heat, akin to the very first steps of Time.



Gravity, according to $G = (10^{1/\log T})^n$, emerged shortly thereafter, and it was this that began to transform the heat of radiation into matter. From which everything was born, expanded, and organized primarily by gravity: atoms, gases, stars, planets, galaxies, etc.

It is therefore not an exaggeration to say that $G = (10^{1/\log T})^n$ is the formula for the Creation of the World. It is, in the strict sense. Always. Forever.

Once again, however, do not see in this formula any absence or presence of a God. If the divine exists, it must be at a level of reality far beyond this. And moreover, even long before this hypothetical possibility — everyone believes what they want, and Mind is for all — let’s have no illusions about this: our reality will remain what it is, an unfathomable assemblage of mysteries.

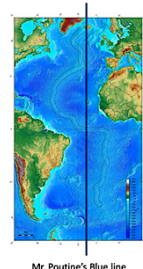
Let's see an example; words are good, but reality is better :

⁵² Buddhism; Zoroastrianism; Hinduism; Taoism; Zen, and then the original Animisms of Africa and the Americas

31. The man of the Kremlin

We inform you that Mr. Vladimir Putin is aware of $G = (10 \wedge 1/\log T)^n$.

1. In 2015 off the coast of Syria, Russian combat aviation swiftly neutralized a large and very modern American warship with a single low-altitude flyby by one of its combat aircraft. This was the first astonishing result of a directed energy weapon, a stationary scalar wave.
2. In 2018, Mr. Putin demonstrated with his hypersonic missiles that Russia also mastered plasmas, which are the technological basis for this. As mentioned earlier (ITER), their subtle relationship with gravity was observed.
3. In 2023, he publicly stated that climate change could be attributed to solar activity. This means that Russia has identified the Gravity-Temperature link. Because as long as it's not established, one operates unknowingly within a conceptual framework that does not permit it⁵³⁻⁵⁴.
4. In 2024 in Ukraine, American services observed that a significant number of Ukrainian aircraft were suddenly disintegrating in mid-flight. They could not identify the cause or even detect a single radar trace of an attack. These were the results of a continuous stationary scalar wave, deployed this time without an identifiable vector. Thus, Russia has progressed between 2015-2018 and 2024.
5. Also in 2024, Mr. Putin indicated that Russia was preparing "new weapons" based on "new physics," without further details. In reality, this is the physics of $G = (10 \wedge 1/\log T)^n$. This casual communication was primarily directed at the American Government as a warning message. Hence, there was no need to discuss it in the media: notifying was sufficient.
6. Finally, since around 2017, Russia has been preparing a mysterious new nuclear hypersonic missile, the "Stormbird," or Burevestnik. On August 18, 2022, we showed and wrote elsewhere that this bird was actually a geostationary electromagnetic weapon, generating a stationary scalar wave. As for its purpose, see the internet, it was already clear: to control from space the line running from the Arctic to the Antarctic, passing between South Africa and South America, up to the northwest of Greenland. This would make it difficult for a potential hostile armada to reach Western Europe. See the article on this topic, available online; search (in french): « hypervélocité, électromagnétisme, Otan ».



⁵³ This question is distinct from the following: Are our modes of production too often polluting and unworthy? Obviously, yes. See, for example, the treatment of animals, which is abominable. All of this would be much better off reformed, but over the necessary time.

⁵⁴ No comments from us on this statement by Mr. Putin. We simply remind you that https://en.wikipedia.org/wiki/Earth%27s_energy_budget **99.97%** of the Earth's energy comes from the sun. **We also recall** these thirteen examples, taken from among many others: **1)** The tobacco industry managed to maintain for half a century that its products had no direct link to cancer, including through numerous sophisticated studies. **2)** Until 2008, the global financial system endorsed the view that derivatives of US subprime loans were of dazzling quality, all certified by the world's financial rating agencies. **3)** At other times, different industries have managed to promote the idea that consuming sugar was beneficial; eggs, harmful; cured meats with nitrates, safe; or that electric light bulbs should quickly become obsolete; etc. **4)** The multinational pharmaceutical companies Purdue (opioids), Servier (Mediator), Sanofi (Depakine), Merck (Vioxx), GSK (Avandia), Pfizer (Bextra), J&J (Risperdal) have, for years, sometimes decades, made people believe that these drugs were safe for health, based on highly standardized and controlled scientific studies. This was before all of it ended in crimes condemned by criminal courts. **5)** The effects of vaccines... no; that's enough.

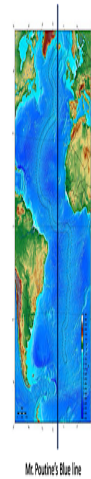
This is to state the obvious: a socially accepted fact does not in any way guarantee that it is rationally accurate or scientifically based. This includes regulated activities, which are approved and monitored by state administrations or those of state communities. That's all folks.

Do you now understand why on **August 18, 2019**, President Trump stunned the world while suddenly wanted to purchase Greenland? Oh yes, you laughed then just like everyone else; but the Donald, he really wasn't there to joke around.

All this information can be found online, from the best sources. At a minimum, it can be concluded that Mr. Putin is a qualified strategist. As for determining what he is broadly informed about, it is not necessary to be intelligence agents⁵⁵ to understand it with sufficient precision. Metalogiqueⁿ alone is enough for this.

From a strategic standpoint, the conclusion is clear: it would be in everyone's interest to pacify the world.

Especially since we may have many other, more exciting interests:



⁵⁵ To the attention of intelligence professionals: we know nothing more than the information in this **§(31)**. As for the rest, it is detailed in this note. Given the current anxious atmosphere, we also specify that we have never had any interest or relationship, in any form, with the Russian or Chinese worlds, or their citizens. Historically and for family reasons, we have been rather connected to the 13th Parachute Dragoon Regiment ; the Foreign Legion ; DRM ; and DGSE: this was years ago, indirectly and without intention—no one chooses their genealogy, and none of this has ever been our concern. And there you go, the pedigree has been completely written.

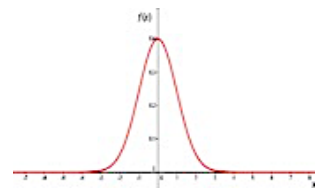
32. Search for Extraterrestrial Life

Things have relaxed in recent years. But the hypothesis of extraterrestrial life remains a controversial subject on cultural, social, and media levels. In a way that is as irrational as it is extraordinarily **ironic**. The irony is that, on this issue, much of modern rationalism has adopted nothing less than the former Dogma of the Catholic Church! The one that asserted the Earth was the unique center of the universe and Man, the sole creation of God (a relationship of exclusivity that, upon reflection, is senseless when considering the divine). Yet this is the reality: a significant portion of today's Rationalists have, without even realizing it, transformed into Inquisitors...

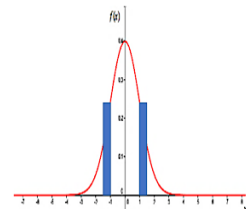
For, irrationality is failing to consider the 93 billion light-years of the observable universe, with its trillions of stars and planets. Even though we have known about exoplanets since only... 1995. In short, both statistics and probabilities heavily favor the possibility of extraterrestrial life. Regardless of its form and degree of sophistication, which are still : **other topics**.

In this matter — just consider our small Earth — the immense difficulty is knowing **where** an extraterrestrial life might be among trillions of possibilities? In this regard, $G = (10^{1/\log T})^n$ provides a dual interesting criterion for selecting targets. A framework that was mentioned in the **note** on page 7, with this graph:

We then explained that all planets should be distributed within this scheme. The narrow peak of the scheme is occupied by stars, which are necessarily much rarer than planets. This obviousness has a mirror-like significance, which can be illustrated as follows (and it is just an image): if extraterrestrial life exists, it could only be found in the two blue bands of this graph. Towards the cold (on the left) or towards the hot (on the right).



These zones indicate, according to $G = (10^{1/\log T})^n$, the places where gravity is present (but neither too little nor too much) and allows for the development of Life. Likewise for temperature, which must be sufficient, but neither too cold nor too hot. Otherwise, considering what we know about Life, either it cannot form, or its matter cannot withstand extreme temperatures.



This is to say that with $G = (10^{1/\log T})^n$, our computational and automated observational means, it becomes possible to define, a priori and quickly, entire lists of relevant targets. Thus, among the trillions of possibilities, the field of investigation is phenomenally reduced. This does not guarantee the discovery of extraterrestrial life. It guarantees the best chance, as soon as possible.

One comment: Earth holds a strategic interest of **= 0** for potential extraterrestrials. The universe is filled with uninhabited planets made only of water, gas, diamonds, gold, uranium, and all sorts of untapped resources available in unimaginable quantities. What more could Earth offer, other than the troubles of its inhabitants? At best, our genetics might present an interest. Then, **≈ 200** DNA human samples graciously provided would suffice. For 200 is roughly the genetic sample (MVP) needed to reflect the minimum required diversity for an entire species, including animals.

In short, on this subject as well, we would do well to adopt a realistic position. And forget **Hollywood**.

Reminder

At the outset of these conclusions, we warned you that you might experience a slight dizziness at some point. If that is the case now, forget about it and perhaps return to it later.

Time brings everything to an end as you probably know,

https://www.youtube.com/watch?v=7wfYIMyS_dl



For your information as well, the discovery of $G = (10^{1/\log T})^n$, validates and fully explains the conclusion made by astrophysicist David Elbaz in 2018 in this video, <https://www.youtube.com/watch?v=HVwXSQHaECA>, starting at 1:14:17 s.

Addressing the increasingly clear shortcomings of current cosmological models and referring to the positions of famous colleagues, he stated that gravity must be an emergent property (= a force derived from..., as demonstrated by $G = (10^{1/\log T})^n$), which therefore has no independent existence. Consequently, we might all be living in a holographic Reality. A hologram of which it was prudent to be cautious — as mentioned earlier, in our opinion.

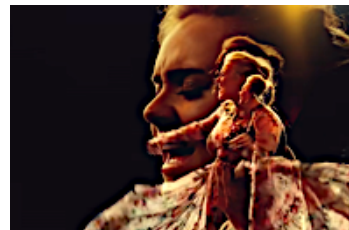
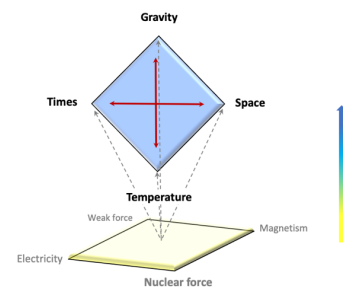
David Elbaz⁵⁶ is a very unique astrophysicist. Firstly, because of his clarity and open-mindedness, which do not get bogged down by irrelevant conventions. Secondly, because of his concern to present the reality of things to the public in clear language. He never claims the authority and arrogance of knowledge that his audience should blindly accept, as they initially know very little. He never treats his audience as incapable children. This is not common. It is extremely rare.

And things often happen like this in practice. Bold hypotheses tend to arise when the old tools increasingly fail to account for the facts. They are the rebellion of intelligence in the face of the incomprehensible. Their confirmation often comes later, usually unexpectedly.

That's how it works.



The Univers
a 4 dimensions Hologram



⁵⁶ CEA Paris-Saclay, Cosmology & Galaxy Evolution Laboratory, cf. https://fr.wikipedia.org/wiki/David_Elbaz



Here ends the presentation of this discovery.

Further details are in the appendices. The remaining work is far beyond our own capabilities. It is the task of a generation and requires as many people working on it.

Those interested in this note should download it. We cannot guarantee how long it will remain available online.

This note is a version 1. It may be amended and clarified at this address in the future. Additionally, new updates will appear soon on various subjects.

For your information, the beggins of this text spreads over more twenty distinct logical levels. Although it may not seem so, we are aware of it.

We could have also adopted a more technical-administrative writing style with an opaque language, which would have been simpler and quicker to edit.

We had to choose a side. We preferred the one presented in this note for the following reason: <https://www.youtube.com/watch?v=L-2PNzgpPaE>, as the opposite is equally detestable when it is unnecessary.

Please accept, Sir and Madam, the expression of our consideration, perfected.

Charles de Mercy
Chammallow
President

A handwritten signature in black ink, appearing to be 'C de M', enclosed in a rectangular box with a horizontal line underneath.

Cc : Alice Ninive, Sam Gupta, I.B, Gisella Schmitt, AdC, Max-Daniel Tanaka, Michaël Brown, I.M, T.D, and their teams. Thanks for their contributions. Not forgetting E. Lauwers / LostReality and the joyful conclusions of our meetings, we had a lot of fun.



Annex (1): The Explanation of a Mystery

This annex revisits elements already discussed.

The Question of Measurement

$G = (10^{1/\log T})^n$ highlights the causal relationship between gravity and the temperature of planets. The reasons why this relationship had not been identified until now can be explained by several factors. Here is a brief attempt at an explanation, where many other surprising facts are also revealed.

Celestial bodies emit a spectrum of light. For instance, the sun appears to us as shining between yellow and white. From this spectrum, we can deduce a temperature (the thermal energy of the object): the lighter the color, the hotter the planet. Conversely, the darker it is, the colder it is. However, the precise analysis of this light spectrum only became possible in the early 20th century, after 150 years of effort. This was when the theoretical frameworks were finally completed, but more importantly, when the methods and precision instruments needed to measure the heat of celestial bodies were developed.



In this field, American astrophysicist Charles Abbot (1872-1973)⁵⁷ made decisive practical contributions. Between **1905** and **1915**, he developed improved tools (such as the silver-disk pyrheliometer) and methods (including the use of high-altitude balloons) that allowed for the standardized study of solar radiation. This innovation also enabled him to make remarkably accurate predictions about the Earth's climate evolution. Even though the relationship between solar radiation and Earth's climate was already a topic of intense debate at the time. Doesn't this remind you of something? Yes, nothing ever really changes under the sun.

This is to say that before around **1915**, due to the lack of precise temperature measurements of planets, the data necessary to establish the Temperature/Gravity relationship was unavailable.

The Extraordinary Year

This was even less possible because **1915** was no ordinary year in the field of gravity. It was the year Albert Einstein completed his Theory of Relativity, a theory he began publishing in **1905**. As mentioned earlier, Einstein successfully bypassed the question of the nature of gravity: like Newton, he did not provide its origin or exact nature. But his theory, along with his most famous formula, $E = mc^2$, represented a phenomenal innovation. This revolution quickly led to numerous significant advances, from nuclear energy to the future GPS, including the idea of solar panels, and a much more precise understanding of reality. Not to mention the nuclear bomb, Hiroshima, 1945, after which shock was inevitable.

Thus, in this dazzling context — unfolding on either side of two World Wars within twenty years, eventually dissolving into Pax Americana — we can understand why the question of the nature of gravity was neglected. As a subject, or relative to the vision Newton had provided three centuries earlier, which still works but only on a local cosmic scale⁵⁸.

⁵⁷ https://en.wikipedia.org/wiki/Charles_Greeley_Abbot . And for those interested in reading a thesis on this topic (in French), https://theses.hal.science/tel-01135850v1/file/these_archivage_2970291o.pdf, starting from pages 243 and 272.

⁵⁸ There was an experiment, the Michelson experiment https://en.wikipedia.org/wiki/Michelson%E2%80%93Morley_experiment, conducted between 1881 and 1887, which could have led to an alternative view of gravity. However, the structure of this experiment did not allow for a conclusion in that direction. No further details on this topic, as it is complex to explain in simple terms.

A Catastrophe

Around the beginning of the 1900s, another event of similar importance contributed to this neglect of gravity as such. This event is now known as the "ultraviolet catastrophe." Its detailed history is complex⁵⁹, so here is a summary of the essentials.

In 1900, German physicist Max Planck proposed a mathematical formula that solved this 'ultraviolet catastrophe'. In practice, his formula prevented the unthinkable—something that did not correspond to reality: that matter exposed to energetic radiation, typically solar, would eventually accumulate so much energy that it would then emit infinite radiation. Since in nature, the balance of all phenomena is subject to the principle of action-reaction. Specifically, if there were no limit to the accumulation of energy by matter, there would be no limit to its release either.

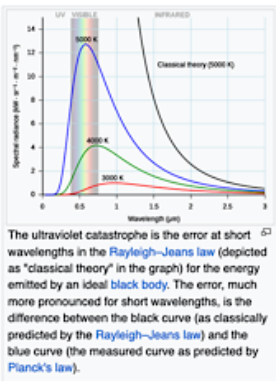
To illustrate this catastrophe, one might say — metaphorically — that, following this reasoning, a Sunday barbecue or a lit fireplace could just as easily turn into a nuclear irradiation experiment. Hiroshima on a family scale. Which never happens.

To ensure the coherence of reality and the formulas of physics, Max Planck made a choice. He decided that the flow of energetic radiation does not function continuously _____, like the flow of a fluid. Because it is this continuity that could cause limitless accumulation somewhere, which would eventually overflow without limit, as mentioned earlier.

Max Planck thus decided that the flow of energetic radiation must operate in discontinuous packets of energy, somewhat like Morse code: - - - - - . Essentially, his solution relies on this innovation: transitioning from a continuous vision of energy to a discontinuous one.

To understand why his solution works, one could use this image, which this time is not just a metaphor — it's real: imagine you decide to cook a chicken in the oven. Over time, the oven temperature rises, and the chicken cooks in approximately 1.5 hours. It can even end up completely charred if the cooking experience lasts longer.

However, if you open your oven every ten seconds and keep it open long enough, years might pass without your chicken ever cooking enough to be edible. Between these two extremes, there is a crucial difference: whether the energy your chicken receives is continuous ————— or has been rendered discontinuous - - - - -

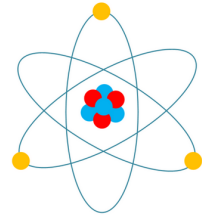


In memory of the Chicken,
Quantum Physics is grateful

Max Planck found this kind of solution. All was well that ended well. Except that, with his decision, he unwittingly discovered the basis of quantum physics. Because the small discontinuous packets of energy he envisioned in 1900 are none other than the "quanta" --- of this revolutionary physics of the infinitely small, to which it owes its name.

⁵⁹ https://en.wikipedia.org/wiki/Ultraviolet_catastrophe provides more details, without fully recounting the issue. The term "ultraviolet catastrophe" was later adopted. The advantage in finding a solution was that Max Planck had been working for years on related questions.

This new physics was so extraordinary that, since then, it has ended up explaining almost all of reality from the level where it operates — the subatomic state of matter. At the same time, it has spawned increasingly spectacular technical advances across all fields over the decades. For example, recently: the laser or the famous quantum computer. But there are many others, and more every day, in various sectors: biology, pharmaceuticals, compounds, or materials with unprecedented and spectacular properties, etc.



Everything was unexpected but ended quite well, more or less.

At this stage, it's important to note a point: whether we are talking about the resolution of the ultraviolet catastrophe, the early steps of quantum physics, or Einstein's revolutionary theory, all this scientific ferment at the time was the work of a limited number of individuals. A few dozen scholars, all from the academic world, immersed in their laboratory experiments, with their experimental apparatuses of limited size.

During this generation of men, between 1900 and before 1940, it was beyond reach to imagine that temperature and gravity could be linked, that one could transform into the other. And it was simply impossible to detect, to measure, to verify. Because gravity manifests mainly on the scale of massive bodies, planets. In a laboratory of that time, anything could have been attempted, nothing would have been detected. As for the theoretical models used by these laboratories, as mentioned earlier, they calculated gravity... with gravity. Which was perfectly satisfactory, given the spectacular practical results obtained.

The Apple of Discord

As the years passed, quantum physics itself hit a wall. This wall is primarily that of gravity. On the macroscopic scale where we live with classical physics, Newton's physics, gravity had always been a mundane phenomenon — though inexplicable — then unexplained for a long time, and finally somewhat neglected as such, as mentioned earlier.

For more details, see also: next appendix, The Question of Measurement.

In the contemporary era and on the microscopic scale of quantum physics, it was eventually realized that we could neither directly calculate gravity nor explain its origin, nature, or function. There has even long been a mathematical prediction (Dyson's conjecture, 1962)⁶⁰ that suggests that, even if quantum physics were one day able to calculate it at its level of infinitely small reality, it would forever remain undetectable.

This is problematic in two ways. Firstly, with this physics, we are supposed to be at the root of reality's root. Secondly, if gravity cannot be directly calculated there, then quantum physics and classical physics will remain forever irreconcilable: they lack the fundamental bridge that creates reality for them to fully communicate.

⁶⁰ https://en.wikipedia.org/wiki/Dyson_conjecture This is cited here for reference. This question requires a high level of mathematical understanding.

A Game of Mirrors

The core of this problem actually lies in the Gravity/Temperature relationship, $G = (10^{1/\log T})^n$

Indeed, by establishing this relationship, we symmetrically highlight the intrinsic limit of the "quantum operation" initiated in 1900 by Max Planck: if energy is no longer continuous - - - - -, then gravity loses its consistency. Since it is linked to Temperature, which itself is of a continuous nature by standard ————— as illustrated earlier by the example of the chicken in the oven. And conversely, when gravity loses its consistency, energy is no longer continuous.

So, if we want one (gravity), we must abandon the other (discontinuity), and vice versa. It's a mirror game that knots in the intimacy of matter. Except that quantum physics cannot exist without this discontinuity. So, in the end, between classical and quantum physics, we must acknowledge reality: these are two distinct worlds.

Certainly, these worlds can be partners. But they are situated on either side of an irreducible boundary. It is, to use this image, like a coin and its reverse. Or the image and its reflection. Both can claim the status of the other from the perspective where each is situated. Indeed, establishing a hierarchy of value between these two levels of reality, quantum and classical, is irrelevant. They are two versions of the world, with gravity being the non-existent bridge between them through temperature, and vice versa.

Conclusions

With this summary, we can understand why, at the macroscopic level and within classical physics, it has long been impossible to solve the mystery of gravity: we did not even have the material means to do so. Then, the mystery was somewhat neglected in the face of the avalanche of progress brought about by Albert Einstein's revolutionary theory.

We also understand why the other revolutionary physics, quantum physics, has not been able (and will not be able...) to resolve, at its level and within its scope, the question of gravity. It is a constitutive problem, directly linked to the foundation of this physics: the discontinuity of energy. Meanwhile, $G = (10^{1/\log T})^n$ states that, since gravity is a factor of temperature, it pertains to the continuity of energy. Temperature, after all, is never otherwise.

This leads to the conclusion that the solution to the mystery of gravity has long been a double victim:

1. The material impossibility of solving it within classical physics, and then its relative disinterest.
2. The almost simultaneous shift in the paradigm of quantum physics, which, while opening the door to its own existence, has also closed the door to gravity within its domain.

All this is clear.

However, within this mystery, there remains one final interesting unanswered question.

The White Rabbit Hole

Since the 1970s and 1990s, it has become clear that our physical and astrophysical theories have reached their explanatory limits. In a manner that was more than spectacular. **95%** of the matter of the Reality was missing from the equation. Moreover, the expansion of the cosmos was accelerating at a dizzying rate, without any further explanation for this phenomenon. Among many other things.



These gaps led to the invention of dark matter and then dark energy. However, these concepts were essentially just a rephrasing — without acknowledging it and dissociated — from the ancient Aether of Descartes and Fatio-Lesage, as mentioned earlier. And, for the past two generations, dark matter and dark energy have been elusive. There isn't even the slightest trace.

Meanwhile, we had colossal technical and financial resources at our disposal during this period. At the same time, the world experienced the relative tranquility of the Pax Americana. The Pax Americana was also quite liberal. All conditions were thus met to think, calmly and openly. Moreover, what was there to reproach anyone for? Nothing.

The question arises as to why, for decades, we have not been able to officially challenge the root of our theories. Especially since dark matter and dark energy are directly related to gravity (a trivial observation). If this question had been — officially and anew — stated as the sole issue to resolve, it is evident to us that the Gravity-Temperature relationship would have been identified much earlier.

To understand the cause of this delay, one could delve into any historical studies desired. In our opinion, but it's just an opinion..., one would find only a convoluted descriptive account of the anomaly, rather than its actual explanation.

The fundamental fact is also that a calculation of the correlations between planetary gravities and their volumetric masses (kg/m^3) reveals a problem: this correlation is **negative** (-0.29), see subsequent appendices. This implies that, in the aggregate, Gravity & Volumetric Mass are not directly related. This constitutes a major problem (see Newton's formulas, Einstein's, etc.). As for this calculation, it is at the level of high school mathematics and 16-year-olds.

If this situation is analyzed in terms of actual probability, even considering the controversy (climate change / solar relationship) that has been ongoing since around 1990, it seems to us that this astronomical anomaly had an infinitesimal chance of occurring.

A way of saying: **0** chance.

Yet, it has occurred.



It is not impossible that somewhere there remains a rabbit hole with a white rabbit to pursue inside.

Appendix (2): The Forces of Nature & the Structure of Reality



For clarity, it might be wise to refocus Physics on:

- 4 primary forces: electricity, magnetism, weak force, strong (nuclear) force,
- At least 3 secondary forces: thermodynamics, electromagnetism, electrostatics,
- At least 1 new tertiary force⁶¹: gravity/thermogravity, as it is a factor of temperature.

It makes no sense to speak of electromagnetism as a primary or fundamental force of reality, and then to make it a science of physics. Although it is obviously very important.

However, just because a physical and mathematical relationship is established between two domains/two forces, electricity and magnetism, does not mean, rigorously speaking, that the combination of these is an autonomous, primary, or fundamental entity. This amounts to confusing the logical levels at play.

Moreover, if the operation had been relevant, one would also have to deny the existence of magnets. Since magnets have exhibited magnetism from the very beginning, completely without electricity in the precise sense of an electric current or a flow of electrons. Yet, they do exist.

This question is not trivial. It is problematic due to the confusion it causes.

In the same way, while we can establish the Gravity/Temperature relationship and then discuss Thermogravity (specifically: Thermo-stato-electro-gravity, TSEG) as a new field of Physics to explore, it seems impossible to regard Thermogravity as one of the primary forces of reality.

It is one of the fundamental phenomena, which is different. Gravity results from Temperature; just as Temperature (thermal energy) results from the manifestations of other primary forces: electricity, magnetism; nuclear force; weak force, etc.

An unification operation must arise from the possibility of Reality, not from a will or desire projected onto Reality. Symmetrically, the split between classical physics and quantum physics clearly demonstrates this: there is an irreconcilable rupture between ————— and - - - - - (see above).

What might seem like a burdensome constraint is, on the contrary, good news. Reality is the upper limit to all our views of things. Otherwise, these views would quickly dissolve into fantasy — or madness.

That's an opinion.

⁶¹ See. The Question of the Nature of Time, mentioned earlier and which will be presented later. If Euripides rightly noted 25 centuries ago that "*Time is a talkative one that reveals everything without being asked*", it was also to say that our frequent conception of it—a neutral and passive reality—is another illusion. Time is the other great scenarist of Reality.

Finally, with 4 fundamental forces paired 2 by 2, Physics should consider **6** key phenomena in Nature, **x 2 = 12** max, if we include a non-commutative geometry that would make the pairs (a,b) of forces non-interchangeable. Now, we only know: **8**.

Annex (3): The Measurement Problem

The measurement problem is not a minor issue; it is absolutely fundamental.

It concerns the Metric, which was illustrated in point (5) at the start of this note when, in search of a variable (Temperature) more relevant than Mass to understand Gravity, we showed, by analogy, that the most effective way to establish human size was to invent and use a meter. In other words, to identify a variable that is not intrinsically tied to the measured object (size), and which is therefore external and universal to avoid falling into the tautology of measurement.

That said, this measurement problem deserves a detailed examination and a more general perspective. The terrain may seem more abstract, but it is much richer.

Newton

When Newton discovered his law of universal gravitation, he crystallized it from a universal constant of gravity, G , which he set at $6.67430 \times 10^{-11} \text{ m}^3 \cdot \text{kg}^{-1} \cdot \text{s}^{-2}$. It is worth noting that his constant, as well as all subsequent measurements of gravity, is expressed in volume (m^3) per kilogram (kg^{-1}) per second (s^{-2}). This unit of measurement, a metric, is explained by the variables used in his formula: mass, weight, and time.



What makes sense is the volume (m^3) per kilogram (kg^{-1}).

We can easily imagine that in reality, a volume (m^3) always has a weight (kg^{-1}).

What is less obvious is the addition of a time unit, the second (s^{-2}).

How, indeed, can a weighty volume be affected by time?

The explanation lies in the fact that in Newton's formula, gravity is a force. A force measured in Newtons (N) is expressed in kilograms per meter per second, fundamentally, $1 \text{ N} = 1 \text{ kg} \cdot \text{m} \cdot \text{s}^{-2}$. Thus, force is equivalent to a weight effect deployed in space and time. Here, things become clear for the scale we are on: a force without a weight effect would have no impact on anything. For it to manifest, it must unfold in time and space.

If you doubt this, we recommend grasping the handle of any door without doing anything else. Nothing will happen, and that's normal. For something to happen, for the door to open, you must act so that your hand exerts weight on the handle (weight effect; force). This will necessarily require some time and space, the space for the handle to swing and the time needed to accomplish it.

If things were otherwise, we would all be living in a world that would be truly miraculous: the universe of effects without discernible cause: *"I touch, it opens," "Get up and walk," "I look up, I fly,"* etc⁶².

Returning to Newton's formula, we can conclude that he established a new metric coherently and specifically for gravity: volume \times kilogram \times second. Although, as mentioned earlier, he did not specify the medium of transmission of this force. According to Newton, this was a question entirely beyond the scope of the Physics of his time. Wisely, noting that his formula worked very well, he postponed this question (for 4 centuries, then!). In this metric, volume \times kilogram already contains gravity. Therefore, as stated at the beginning of this note, gravity calculated this way can only be done through implicit gravity. Thus, in the end, the mystery remains intact.

⁶² A passing remark: if you wanted to gain from the public the enviable reputation of a magician, prophet, divine envoy, or that of some supernatural extraterrestrial, here's what you need to do: produce effects with no discernible cause and without saying too much about it. And if you can't manage that..., organize a deception with the help of accomplices. It's immoral, yes, but it works very well everyday.

Einstein

When Albert Einstein completed his Theory of Relativity in 1915, the first thing he actually achieved was establishing a new metric: Space-Time. Something that combines the 3 dimensions of space (height, width, depth) and the dimension of time (tick-tock).



From then on, the term "Space-Time continuum" started to be used.

This allowed for endless elaboration on the subject and fascinated crowds, both past and present; the media got involved as well. People learned that, contrary to what they had known all their lives, they were unknowingly moving through a universe with **4 dimensions**.

This triggered a widespread cognitive short-circuit globally.

For most people, space and time were until then distinct realities, although they were always associated. Living in space was known. Spending time was known. Understanding that shopping requires time spent traveling through space and vice versa was never in doubt. But knowing that two variables (time/space) could be combined is very different from learning that, according to Einstein, they are a single entity.

A continuum.

An indivisible whole.

"Am Stram Gram" in a single indecipherable word: amstaramgram.

Spontaneously, this was as incomprehensible as it was incredible: *"Sitting in my chair for a good hour, I will never move a single meter more."* This is true if you are unaware that you live on a moving planet. Otherwise, you can calculate that the hour spent in your chair has moved you 107,000 km, though relatively to the Sun. Here lies the whole question of the reference frame. More precisely, the awareness or lack thereof of the relevant frame for understanding what is happening.

Nevertheless, the fundamental fact is that we are not aware of the movement of the Earth's reference frame because it is uniform and ————. So little that, from an experiential and conceptual point of view, we quickly feel that our planet is fixed, immobile. And that between day and night, it must be the sun moving around it. When, in reality, it is the other way around - we orbit around the sun.

Add $E = MC^2$ and it's time for Einstein = Stroke.

- « *What's with this story of energy equaling matter through excited light speed?* »

A widespread cognitive short-circuit.

Knowledge does not change much in practice; our senses remain out of sync with thought.

So much so that regarding the Theory of Relativity, you can still hear statements like: *"With Relativity, Theater becomes Actor."* Meaning: space and time (the Theater), previously separate and passive, living their lives in their own corners, have become an acting force (the Actor) through their established continuum.

It's nice. Honestly, it's elegant. Dazzling. Shakespeare could hardly have done better.

But it does not illuminate what actually happened.

In reality, Einstein's proposal was so intellectually powerful that, in the process, it was somewhat forgotten that the "space-time continuum" is also and primarily a Metric. A way of measuring things. This is never done absolutely absolutely: a reference frame is always required. Ideally, the chosen frame should be as little intrinsically linked to the object being measured as possible. Thus, one can know what one is dealing with as accurately as possible, because it is as independent and universal as possible of the dimension being measured. Cf. point (5) the case of the meter for measuring human height.

With Einstein and Relativity, gravity is not, strictly speaking, measured by the phenomenon that generates it, $G = (10^{1/\log T})^n$. It is placed in a new geometric wrapper, Space-Time, a metric — spatio-temporal to be precise — that, due to its shape (locally curved), indicates what gravity looks like through its effects: the measurement is indirect.

And it is always relative to this metric, as within it. Considering that the formula always uses a hint of fundamental gravitation, cf. above. Hence, as with Newton, Einstein's formula does not calculate gravity independently of gravity.

Quantum Physics; Max Planck

This field is also faced with a measurement difficulty. It is referred to as "The measurement problem." Although it may not seem so, quantum physicists are actually simple and amusing people: they describe their issue by its hassle; it wraps and silences it up nicely.

Here, <https://www.youtube.com/watch?v=Ac3Wwn1Utzk>, you can hear a mathematician (Alain Connes) and a physicist (Hervé Zwirn) discuss it. They fail to find common ground that would at least give them something to solve.

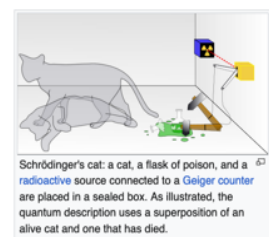


In this physics, the problem refers to a situation where, at the scale of the infinitely small and what we know today, real objects have both a particle form, thus discontinuous and locatable, - - - - - and a wave form. A wave that is therefore everywhere, continuous, and non-localizable — because it is a wave. It's roughly the difference between the wind and a grain of sand but for the same object. And this complicates everything.

The problem arises when measuring in this tiny quantum world. Establishing a measured quantity. One realizes that it is as if the result (particles, waves, values...) is determined at random by the one doing the measurement. Seeing the measurement depend on the measurer obviously raises a scandal.

Who and what can be trusted then?

This is what Schrödinger's famous cat metaphor⁶³ suggests in another way. (Is the cat dead or alive?)



In our view, "measurement problem" in quantum physics implicitly and again pertains to an issue of Metric. In real terms, what is a measurement? Regardless of the object of its calculation (mass; energy; volume; weight; charge, etc.), a measurement is always an operation directly dependent on time: there is a before; a during; and an after the measurement.

This means that:

⁶³ Schrödinger's cat : https://en.wikipedia.org/wiki/Schr%C3%B6dinger%27s_cat

- Time is the key metric variable of the "Measurement Problem" in quantum physics.
- To understand what is happening in this problem, one must first resolve the question of the nature of Time. Since its nature remains as enigmatic as gravity was. This situation is general. It is not limited to quantum physics. Nowhere do we have an effective definition of Time.
- The resolution of the nature of Time cannot be obtained within quantum physics and its tools. Different branches of this physics have already fragmented the concept of time (effectively for each of them).
- If there is a need to measure an object that is qualitatively and quantitatively variable (cf. wave/particle, etc., and their values), then an effective conception of time must be elastic. Yes, elastic ~~~~~~. It is simply logical: it aligns the measurement (time) with the reality one intends to measure, continuous (wave) or discontinuous (particle). Otherwise, it is as if one were trying to measure a sunbeam with a meter (the wave case), or an apple with a burst of laughter (the particle case). This necessarily generates the surreal paradoxes still observed today: the measurement result seems to depend on the measurer. A true scandal.

Solving the enigma of Time requires a development similar to that of this lengthy note. It will be presented later. As you can imagine, "elastic time" leads us elsewhere. Directly to Alice in Wonderland,

- "But what time is it?!"
- "Ten ten."
- "Can we say ten to ten? That would suit me."

Of course, mastering time will also offer new unimaginable opportunities. But it is not yet time to talk about this, as it would be too general here.

Vision & Understanding of Reality

This question of Metric is so fundamental that, in the end, it often silently determines the essence of our vision and understanding of Reality.

$G = (10^{1/\log T})^n$ strays far from masses, volumes, distances, time, space, and the result is: "Gravity is a factor of Temperature," which clarifies many questions.

(And conversely: Temperature is a factor of Gravity; the variables are interchangeable here.)

It is therefore not impossible that by re-examining other current metrics in terms of their intrinsic relationships with the objects they measure, we could make equally interesting discoveries. It is not guaranteed, but it is simply possible. The same goes for thinking and rethinking Reality solely through the question of the Metric and its nature: who says that, in the end, one single, truly universal metric is impossible? – a beautiful perspective on the horizon.

In the final analysis, apart from a few fundamental variables, it is also likely that we will eventually find that the Reality we live in is a logical construct. But a construct that, from this small number of variables, is primarily animated by metalogic, the logics of logics of logics..., and ultimately by Metalogiqueⁿ, like an Ecology of the Mind.

This completely transforms the meaning of the word Logic, towards much greater **Awareness**. Cf. Above, point **24**, quantum computers, whose conclusion ("invest in the human") speaks of nothing else. Of an awareness.



Möbius Strip

Hamster in the Cage

Myth of Sisyphus

Ouroboros

Carousel of Little Horses

We thank you for your attention.

Keywords

$G = (10^{1/\log T})^n$ # Gravity # Metric # Physics # Quantum Physics # Astrophysics # Life Sciences # Medicine # Solar System # Pump of Reality # Black Holes # Black Donut # Big Bang # Universe # Thermogravity # Antigravity # Industries # Engineering # Finance # Quantum Computer # Artificial Intelligence # Metalogiquen # Ecology of the Mind # Nuclear Fusion # Plasmas # Thermal Engines # Hydrogen # Hypersonic # Putin # Hologram # Extraterrestrial Life

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« Don't mess the Chammallow »

Annexe (4) : Sources & Data

A. To find the basic data for this note (wikipedia + its pictures):

1. Pluto: [https://en.wikipedia.org/wiki/Pluto_\(dwarf_planet\)](https://en.wikipedia.org/wiki/Pluto_(dwarf_planet))
2. Neptune: <https://en.wikipedia.org/wiki/Neptune>
3. Uranus: <https://en.wikipedia.org/wiki/Uranus>
4. Saturn: <https://en.wikipedia.org/wiki/Saturn>
5. Jupiter: <https://en.wikipedia.org/wiki/Jupiter>
6. Mars: <https://en.wikipedia.org/wiki/Mars>
7. Moon: <https://en.wikipedia.org/wiki/Moon>
8. Earth: <https://en.wikipedia.org/wiki/Earth>
9. Venus: [https://en.wikipedia.org/wiki/Venus_\(planet\)](https://en.wikipedia.org/wiki/Venus_(planet))
10. Mercury: [https://en.wikipedia.org/wiki/Mercury_\(planet\)](https://en.wikipedia.org/wiki/Mercury_(planet))
11. Sun: <https://en.wikipedia.org/wiki/Sun>

B. Correlation of Gravities and Volumetric Densities (kg/m^3) of Celestial Bodies in the Solar System:

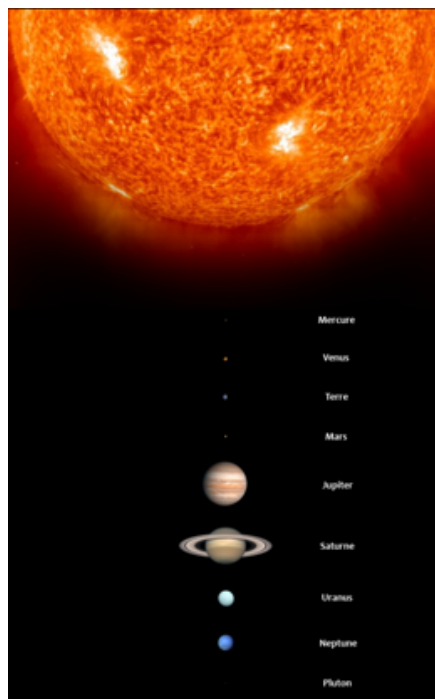
	Gravité (G)	Mass Density
	At surface m/s	Kilo / m3
Sun	273,95	1408
Jupiter	24,79	1326
Saturn	10,44	687
Neptune	11,15	1638
Uranus	8,69	1270
Earth	9,81	5515
Venus	8,87	5243
Mars	3,71	3933
Mercury	3,70	5427
Moon	1,62	3344
Pluto	0,63	1860
Correlation Coefficient		-0,29

This correlation is not merely weak or null; it is **negative**.

In reality, gravity has no kind of relationship with the depth of mass that is precisely defined by volumetric density, i.e., weight in kilograms per cubic meter (kg/m^3). This diagnosis can be verified on any Excel sheet; use the standard function: =CORRELATION()



Solar System scaled representation, except for the alignment of the planets which are not on this vertical line:



In retrospect, what should we be surprised about?

